User's Guide

NVIDIA DualTV MCE

For Microsoft Windows XP
Media Center Edition (MCE)

DU-01848-001_v05
December 2005

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Introduction

Transform your PC into a home entertainment center! The NVIDIA® DualTV tuner card allows you to enjoy dual-channel analog TV in a Microsoft® Windows® XP Media Center Edition® (MCE) environment.

About This Guide

This User's Guide provides set-up and operation instructions for the NVIDIA DualTV on a Microsoft Windows XP Media Center Edition (MCE) equipped PC. For more information about Microsoft Windows XP Media Center Edition, please visit:

http://www.microsoft.com/windowsxp/mediacenter/default.mspx

Overview

Transform your Media Center PC into a complete entertainment center:

- Simultaneously watch and record two separate channels of live TV.
- Experience superior quality TV and personal video recorder (PVR) with hardware MPEG-2 encode, advanced 3D comb filter, and 3D noise reduction with NVIDIA PureVideo™ technology.
- Store more of your favorite TV programs on your hard drive or a DVD with NVIDIA MediaSqueeze™ technology.
- Effortlessly capture, edit, and archive your videos (with Microsoft MovieMaker, which is included in MCE).
- Take full advantage of the Microsoft Windows XP Media Center Edition 2005 dual tuner and PVR capabilities.
- Imaging Science Foundation (ISF) and "Designed for Media Center Edition" certifications guarantee the highest level of picture quality and Windows compatibility.
- Install and use within minutes.

The NVIDIA DualTV tuner card is available in two versions — NTSC (for North America and part of Asia) and PAL (for Europe and part of Asia). The PAL version also supports SECAM.

Features and Functions

- Dual-channel analog TV reception
  - Off-air (terrestrial) broadcast
  - Cable TV broadcast
  - Set-top box compatible (with S-video or composite video connections)
- FM radio reception
- Dual-channel direct A/V capture
- Dual-stream MPEG2 main profile @ main level (MP@ML) encoding
- 3DYC (3D comb filter) and 3DNR (noise reduction)
- Bracket connectors
  - TV (with internal splitter)
  - FM
  - Direct A/V input (2 sets)
    - S-Video (composite via adapter) – 4-pin DIN
    - Line-level stereo - minijack
- On-board internal connectors (only used on OEM PCs for front-panel or back-panel inputs)
  - 2 x Video-In (5-pin)
  - 2 x Audio-in (4-pin)

Microsoft Windows XP Media Center Edition (MCE) Environment

When working on a Microsoft Windows XP Media Center Edition 2005 PC system, the NVIDIA DualTV tuner card provides direct connections with the following for reception of TV broadcast:

- An antenna or cable TV feed
- Up to two set-top boxes (receiver/decoder units for reception of digital cable, satellite, or terrestrial broadcast TV) using direct A/V input ports
- An FM antenna connection

The MCE application gives you access to an on-screen program guide. With this you can program TV recordings days or even weeks in advance.

You can use an MCE-compatible remote control (sold separately) to navigate within the MCE application.

The NVIDIA DualTV CD provides the following software to support your MCE environment:

- NVIDIA PureVideo decoder (MPEG2 decoder)
- NVIDIA MCE Extensions
- NVIDIA DualTV WDM Driver

The NVIDIA DualTV tuner card is compliant with the following:

- Microsoft WHQL
- Designed for Microsoft Windows XP Media Center Edition
- Imaging Science Foundation (ISRL/ISF)

Note: If you intend to use your set-top box with MCE, using the set-top box as a TV receiver/tuner and DualTV as the A/V capture device, you need to have an MCE-compatible remote control/receiver with IR blaster(s). The receiver unit controls up to two set-top boxes to change channels. An MCE-compatible remote control/receiver with IR blasters can be purchased at the NVIDIA online store

Note: At the time of publication of this document, the MCE application itself does not support video capture from a non-broadcast source. For example, MCE allows you to receive TV programming from a terrestrial, satellite or digital cable set-top box, but does not directly support video capture and archiving from a camcorder or a VCR. For video capture and archiving, you can use Microsoft MovieMaker (included in the MCE build) in conjunction with DualTV's A/V input capabilities.

Unpacking Your NVIDIA DualTV Tuner Card

Minimum System Requirements

- 1.6 GHz Pentium 4, Celeron, or equivalent Athlon/Sempron CPU (2.4 GHz recommended for all CPUs)
- 256 MB system memory (512 MB highly recommended)
- Available PCI slot
- Graphics with 64MB DDR, DXVA (motion-compensation), and Microsoft Direct X 9.0 support (128MB DDR recommended)
- 20 GB free space on an Ultra DMA (ATA/66) hard disk (40GB or more recommended)
- DirectSound compatible sound card or integrated audio
- CD-ROM drive (DVD-ROM or DVD recorder drive recommended)
- Microsoft DirectX 9.0 or later. If this is not already installed on your MCE system, download from the Microsoft website at: http://www.microsoft.com/downloads/search.aspx?displaylang=en&categoryid=2
- Microsoft Windows XP Media Center Edition 2005 or later with latest service pack

Note: For MCE-specific system requirements such as CPU speed, graphics requirements, or Internet access, refer to the MCE documentation.

Unpacking

The NVIDIA DualTV MCE is available in NTSC and PAL versions. Figures 1 and 2 show the NTSC and PAL NVIDIA DualTV tuner cards, respectively. The following is a list of the product package contents. If any item is missing, please contact your retailer immediately.

1. NVIDIA DualTV tuner card. Available in both NTSC and PAL/SECAM versions.
2. NVIDIA DualTV MCE CD with NVIDIA PureVideo decoder, NVIDIA Driver and User's Guide (a PDF of this document).
3. FM Antenna Cable. Connects to FM antenna input on the NVIDIA DualTV tuner card.
4. S-Video Cable. Connects to set-top box or other video equipment.
5. Composite-to-S-Video Adapter. Allows composite video cable to connect to the NVIDIA DualTV tuner card.

6. RCA Cable for Composite Video and Stereo Audio. Connects to set-top box or other video equipment.
7. Minijack to Dual RCA Audio Cable. Allows stereo RCA cable to connect to the NVIDIA DualTV tuner card.

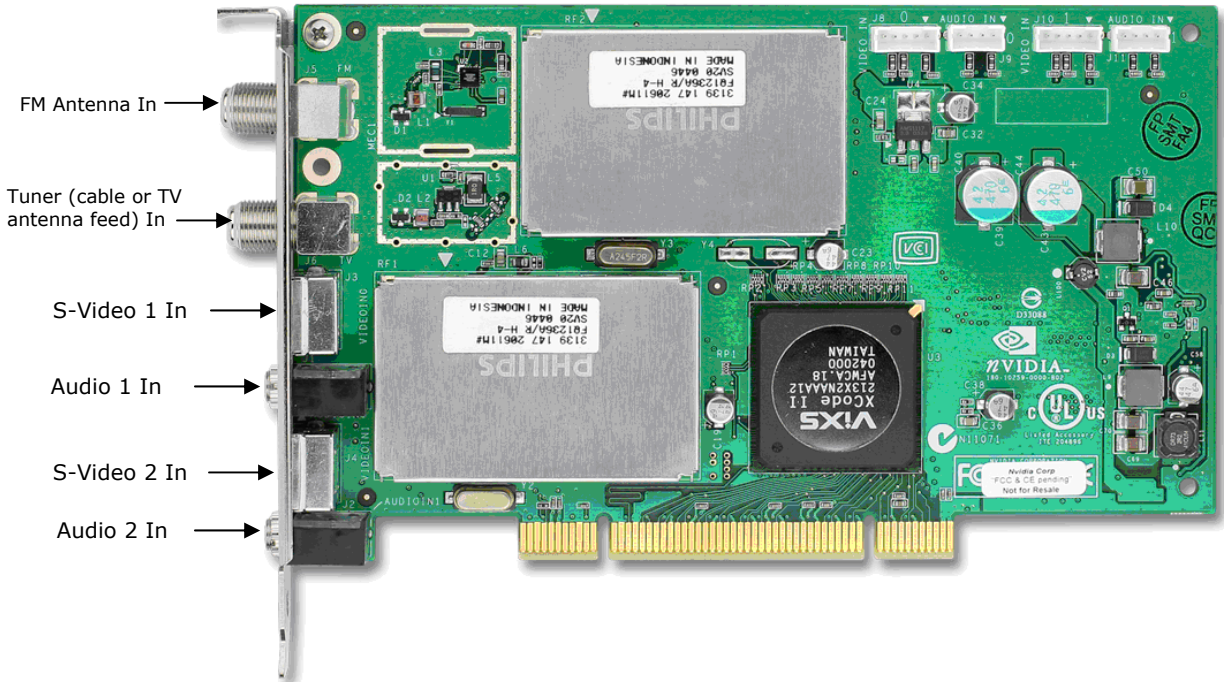


Figure 1. NVIDIA DualTV Tuner Card, **NTSC** Version

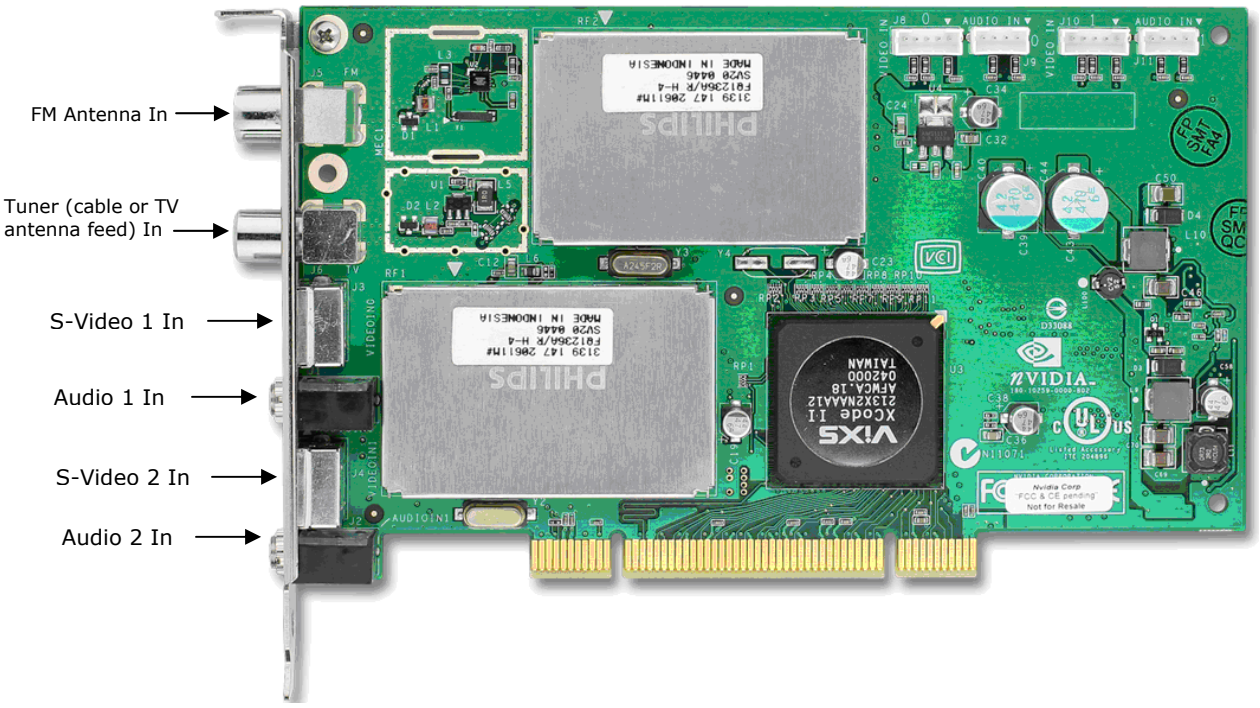


Figure 2. NVIDIA DualTV Tuner Card, **PAL** Version

Hardware Installation and Connections

Installing the NVIDIA DualTV tuner card hardware requires opening your computer. Please follow all of the safety instructions provided here to ensure that there is no damage to you, your computer, or the tuner card.

Safety Instructions

To reduce the risk of fire, electric shock and injury, always follow basic safety precautions.

Remember to remove power from your computer by disconnecting the AC main source before installing any equipment into the computer chassis.

Before You Begin

IMPORTANT: Any previous analog tuner card drivers must be *completely* removed to avoid conflicts. NVIDIA recommends that you uninstall these drivers prior to removing the old hardware and installing the NVIDIA DualTV tuner card.
If you have any existing DVD decoders other than NVIDIA PureVideo decoders, it is highly recommended that these software programs be completely removed.

Your computer may already have an analog tuner card installed. If so, you need to uninstall it and replace it with the NVIDIA DualTV tuner card. You also need to uninstall any other WDM Drivers for TV tuner cards. Go to **Start➢Control Panel➢Add or Remove Programs**. Select the installed analog TV card drivers and click **Add/Remove**. This will uninstall all files associated with the drivers you have selected.

Use this same procedure to remove any existing DVD decoders.

Installing the Hardware

Note: All hardware must be installed prior to installation of the software.

Use the following procedure to install the NVIDIA DualTV tuner card into your computer system. Use Figure 3 on the next page as a guide to connecting cables to your NVIDIA DualTV tuner card.

1. Turn off the computer, monitor, and any peripheral equipment and **disconnect the power cord to the PC**.
2. Open your computer; refer to your computer documentation for assistance.
3. Remove any metal plate that covers the **PCI** slot you selected on the motherboard so the tuner card connectors are accessible from the back of the computer (you will use the screws to secure the card).
4. Install the NVIDIA DualTV tuner card into the selected **PCI** slot.
5. Secure the tuner card using any hardware (screws) removed when you removed the metal plate or an existing analog tuner card.
6. Reinstall the cover on your computer and reconnect any cables removed earlier.
7. Connect the cables to your new NVIDIA DualTV tuner card (see Figure 3). If a TV antenna or TV cable is used, attach the signal source to the **CATV** connector on the card. If you are connecting a set-top box, see *Connecting a Set-top Box or Other Video Equipment* on page 10.

   Note: The cable connection for capturing analog video output from a camcorder or VCR is the same as that for a set-top box (see Figure 4).

   Note: If you have an MCE-compatible remote control/receiver but have not connected the USB receiver to the MCE system, please plug that in only after the NVIDIA DualTV software installation (next chapter).

8. Connect the power cord to your system.

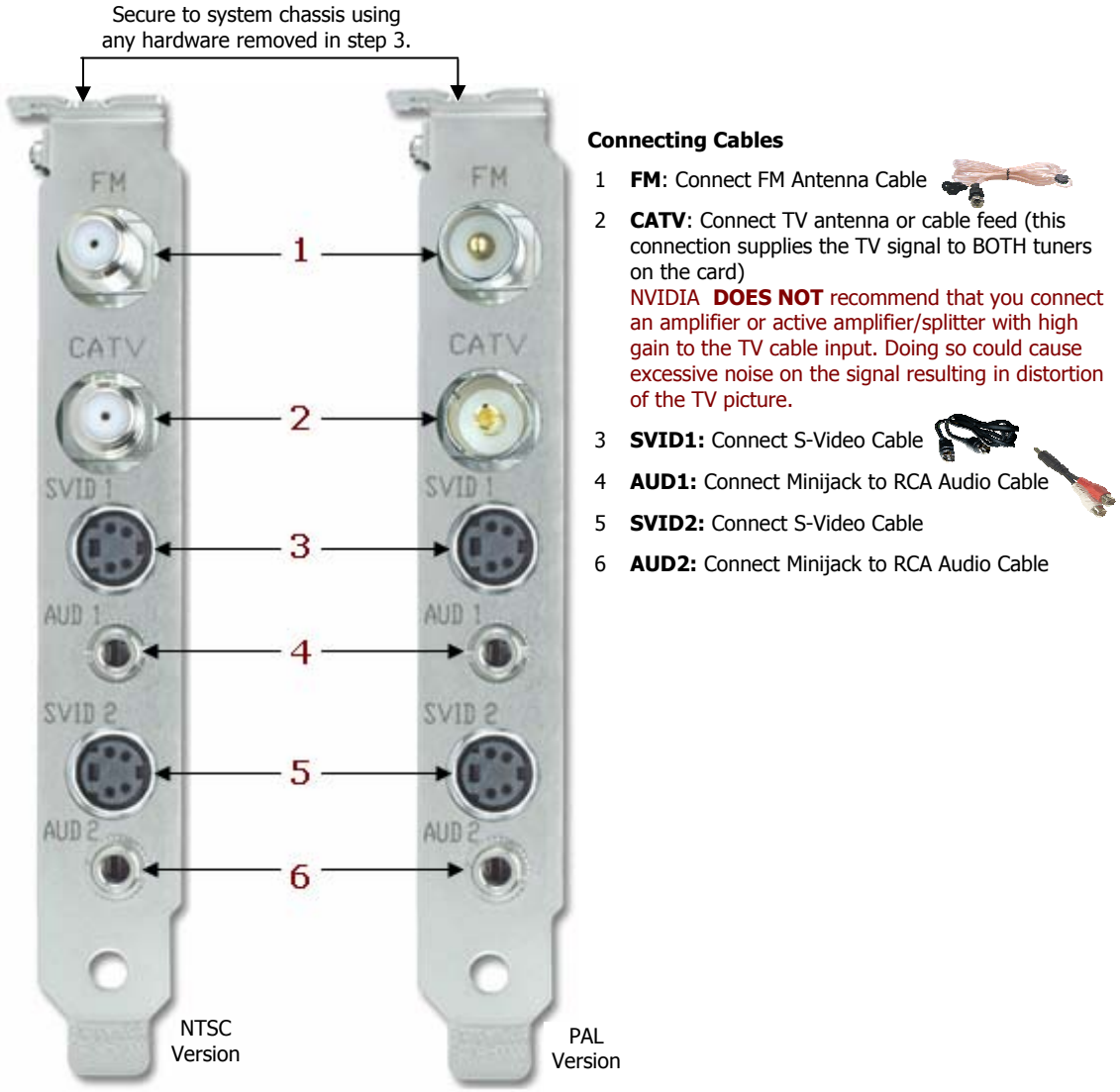

Secure to system chassis using
any hardware removed in step 3.
FM
CATV
SVID 1
AUD 1
SVID 2
AUD 2
1
2
3
4
5
6
NTSC
Version
PAL
Version
Connecting Cables
1 FM: Connect FM Antenna Cable
2 CATV: Connect TV antenna or cable feed (this connection supplies the TV signal to BOTH tuners on the card)
NVIDIA DOES NOT recommend that you connect an amplifier or active amplifier/splitter with high gain to the TV cable input. Doing so could cause excessive noise on the signal resulting in distortion of the TV picture.
3 SVID1: Connect S-Video Cable
4 AUD1: Connect Minijack to RCA Audio Cable
5 SVID2: Connect S-Video Cable
6 AUD2: Connect Minijack to RCA Audio Cable

Figure 3. NTSC and PAL Card Connections

Connecting a Set-top Box or Other Video Equipment

When connecting *one* set-top box, use the **SVID1/AUD1** connectors. Use the **SVID2/AUD2** connectors for a *second* set-top box. Always use the **SVID1/AUD1** connectors first.

Use the following procedure to connect a set-top box.

1. Use the S-Video Cable to connect from S-Video Out on the set-top box to **SVID 1** on the NVIDIA DualTV card.
   Or
   Use the Yellow Wire of the RCA Cable to connect Composite Video Out on the set-top box to the Composite Video Adapter, then connect the Composite Video Adapter to **SVID 1** on the NVIDIA DualTV card.

2. Use the Red and White wires of the RCA Cable to connect to the right and left Audio Out respectively on the set-top box. Connect the other end of the Red and White wires of the RCA Cable to the Minijack-to-RCA Cable. Finally, connect the Minijack-to-RCA Cable to **AUD 1** on the NVIDIA DualTV card.

Repeat this procedure using **SVID2** and **AUD2** to connect to a second set-top box.

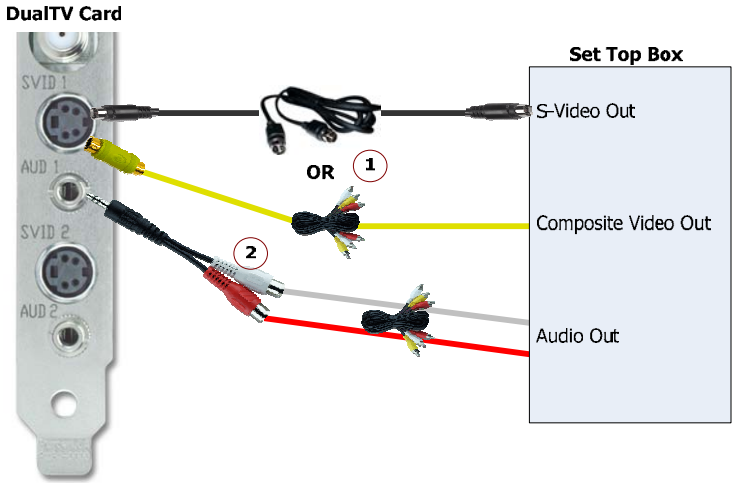


Figure 4. Connecting a Set-top Box

Note:	MCE requires an MCE-compatible remote control/receiver with IR blaster(s) to control set-top boxes (up to two). If your remote receiver is not already connected to the MCE PC, please plug that in only after the NVIDIA DualTV software installation (next chapter) but before setting up the TV signal in MCE.
Note:	The cable connection for capturing analog video output from a camcorder or VCR is the same as that for a set-top box.

Software Installation

The CD that has been shipped with your NVIDIA DualTV MCE contains the following software:

- NVIDIA PureVideo decoder software
- NVIDIA MCE Extensions
- NVIDIA DualTV WDM Driver

Note: All the NVIDIA DualTV hardware must be installed prior to installation of the software. See Hardware Installation on page 7 if you have not installed the hardware.

If you have an MCE remote control/receiver and it is not already connected to the MCE PC, plug it in only after the software installation (this chapter) and before setting up the TV signal in MCE (see next chapter).

When you see the "**Found New Hardware**" (detecting new tuner hardware) screen after you have inserted the NVIDIA DualTV tuner card and powered up the system, click **Cancel**. Then insert the CD and run the software installation program.

If the "**Found New Hardware**" (detects WDM drivers) screen is displayed after software installation and system restart, click **Next**, then **Finish**.

After the software installation, you need to configure the tuners (NVIDIA DualTV provides 2 tuners on a single card) in MCE (see next chapter).

Installing Software and Registering Your NVIDIA DualTV Card

Installing the NVIDIA DualTV software and registering your NVIDIA DualTV card consists of the following procedures:

- Power up the system
- Verify the environment— check for MCE, NVIDIA DualTV card, administrator privileges
- Select components, install path, and check for existing analog tuner cards
- Check for software updates
- Install the NVIDIA PureVideo decoder—requires activation key
- Install the NVIDIA DualTV WDM driver, User's Guide(s), and short-cuts
- Register the NVIDIA DualTV product
- Restart the system—you will then need to configure your tuner in MCE

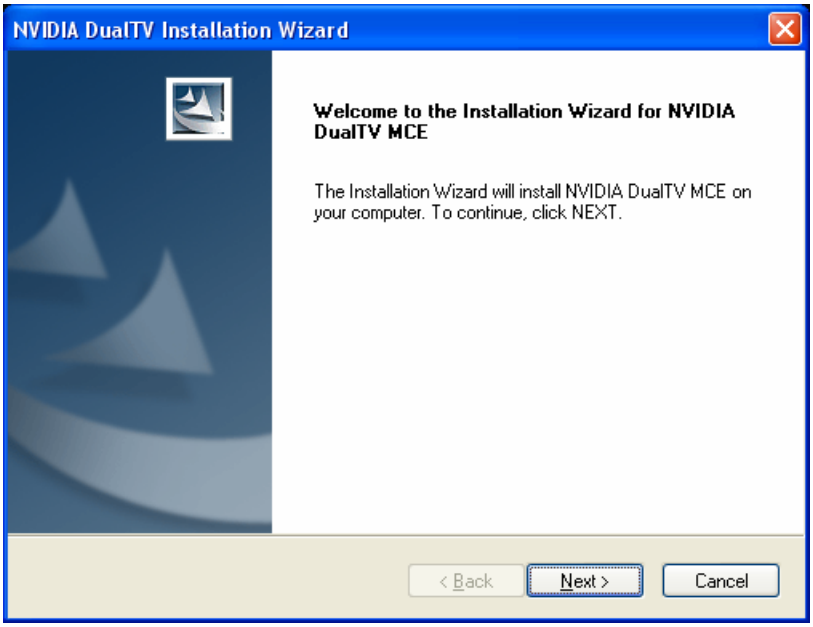
The procedures are explained in the steps below.

1. Power up your computer.
   It is always a good idea to disable any antivirus software before installing new software.
2. Click **Cancel** if the "**Found New Hardware**" screen (shown below) is displayed.

Found New Hardware Wizard
Welcome to the Found New Hardware Wizard
Windows will search for current and updated software by looking on your computer, on the hardware installation CD, or on the Windows Update Web site (with your permission).
Read our privacy policy
Can Windows connect to Windows Update to search for software?
Yes, this time only
Yes, now and every time I connect a device
No, not this time
Click Next to continue.
< Back
Next >
Cancel

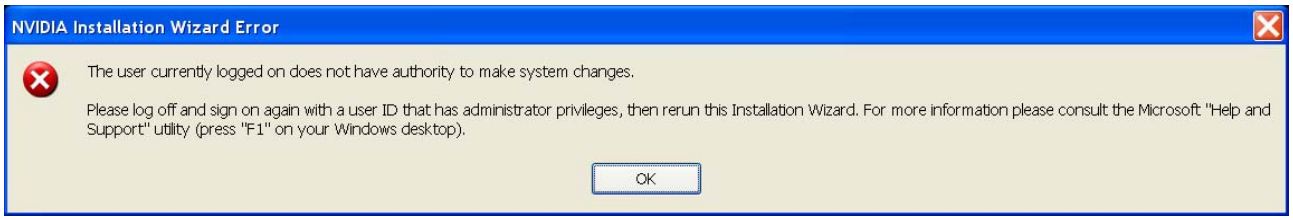
3. Insert the NVIDIA DualTV CD into your CD drive.
   The NVIDIA DualTV installation wizard is launched. If the wizard does not run automatically, select **Run** from the **Start** menu on Windows desktop, click **Browse**, browse to the CD, select **Setup**, and click **OK**.

4. Click **Next** from the Welcome screen.

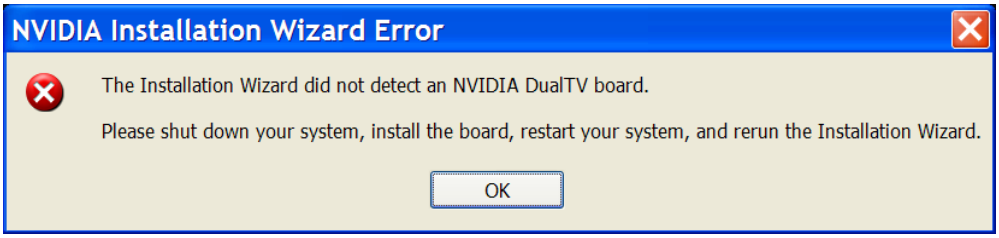

NVIDIA DualTV Installation Wizard
Welcome to the Installation Wizard for NVIDIA DualTV MCE
The Installation Wizard will install NVIDIA DualTV MCE on your computer. To continue, click NEXT.
< Back
Next >
Cancel

The following events may occur after you press **Next**.

- If the user ID with which you logged on to Windows does not have Windows "administrator" privileges, the following screen will be displayed. Press **OK** to exit the software installation and log on again with an administrator ID.


NVIDIA Installation Wizard Error
The user currently logged on does not have authority to make system changes.
Please log off and sign on again with a user ID that has administrator privileges, then rerun this Installation Wizard. For more information please consult the Microsoft "Help and Support" utility (press "F1" on your Windows desktop).
OK

- If the wizard does not detect a NVIDIA DualTV card in the system, the following message will be displayed. Press **OK**, and follow the instructions.


NVIDIA Installation Wizard Error
The Installation Wizard did not detect an NVIDIA DualTV board.
Please shut down your system, install the board, restart your system, and rerun the Installation Wizard.
OK

- The NVIDIA DualTV MCE works only on MCE. If your system does not have the MCE operating system installed, the following screen will be displayed.

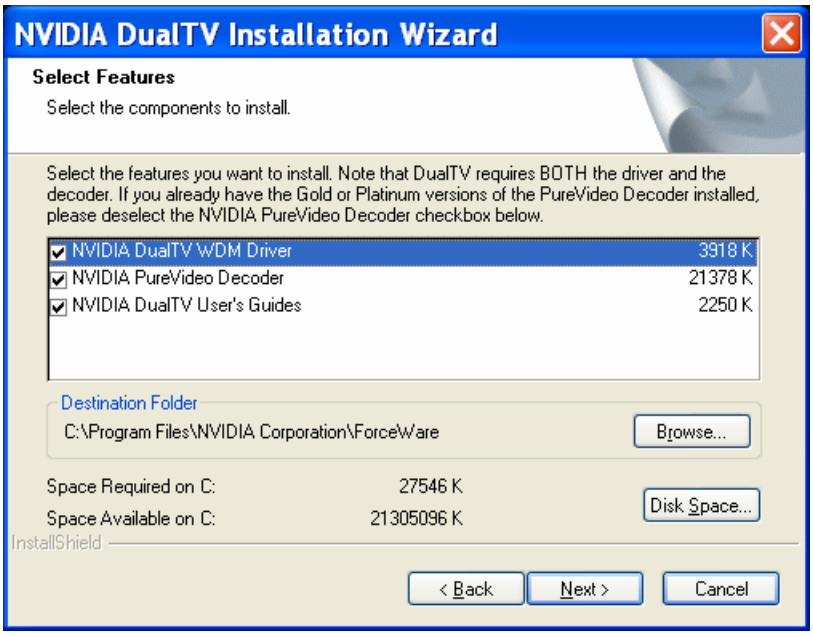
Click **OK**, then make sure you install NVIDIA DualTV MCE on an MCE system.

NVIDIA Installation Wizard Error
NVIDIA DualTV requires Windows XP Media Center Edition.
Please install Media Center Edition before running the Installation Wizard again.
OK

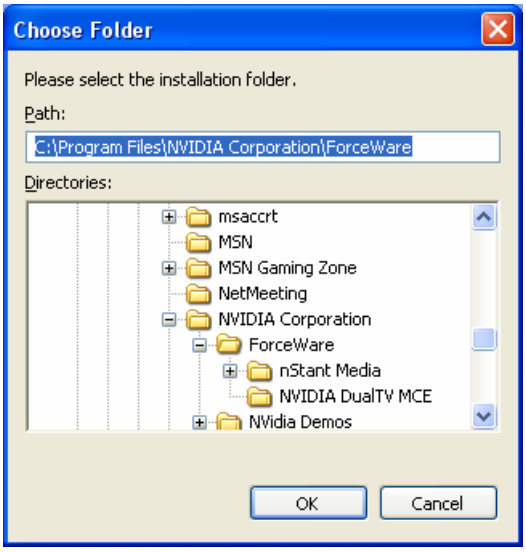
5. Select the components you wish to install. On an initial NVIDIA DualTV install, you should select all components listed, and optionally specify the path for the NVIDIA PureVideo decoder and User's Guide (a PDF file). The exception to this is if you already have the Gold or Platinum version of the NVIDIA PureVideo decoder installed on your MCE system. In this case, NVIDIA recommends that you skip the installation of the NVIDIA PureVideo decoder.

   The NVIDIA DualTV software package includes the Bronze version of the NVIDIA PureVideo decoder.

Note: The screen (see below) displays "NVIDIA DualTV User's Guides" as a component to install.

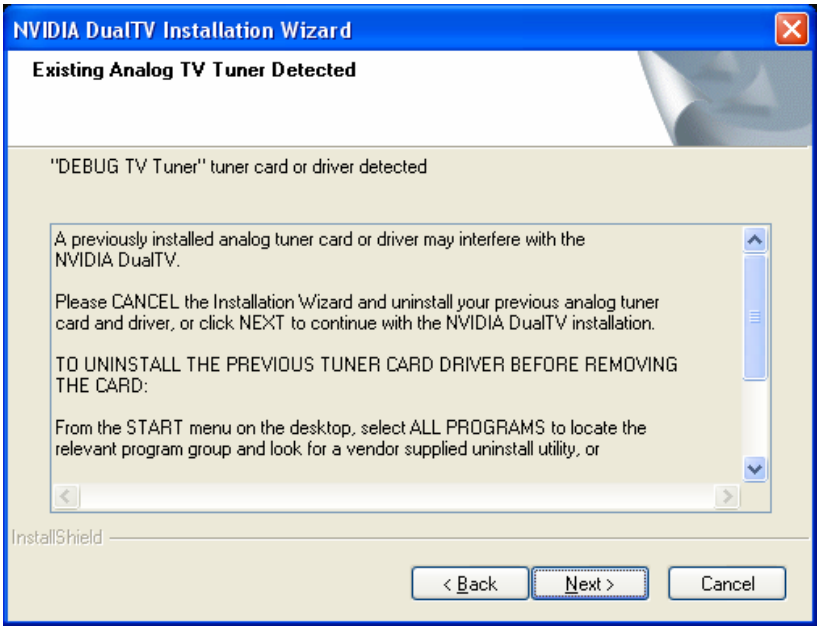

NVIDIA DualTV Installation Wizard
Select Features
Select the components to install.
Select the features you want to install. Note that DualTV requires BOTH the driver and the decoder. If you already have the Gold or Platinum versions of the PureVideo Decoder installed, please deselect the NVIDIA PureVideo Decoder checkbox below.
NVIDIA DualTV WDM Driver 3918 K
NVIDIA PureVideo Decoder 21378 K
NVIDIA DualTV User's Guides 2250 K
Destination Folder
C:\Program Files\NVIDIA Corporation\ForceWare
Browse...
Space Required on C: 27546 K
Space Available on C: 21305096 K
Disk Space...
InstallShield
< Back
Next >
Cancel

- When you click **Browse** the following screen is displayed for you to select the install path for the NVIDIA PureVideo decoder and NVIDIA DualTV User's Guide(s).



- If "NVIDIA DualTV WDM Driver" is selected and the installation wizard detects the presence of a third-party analog tuner card, the following screen will be displayed. NVIDIA recommends that you uninstall the driver for the third-party tuner card before physically removing the card from the system. The next two screens are displayed:

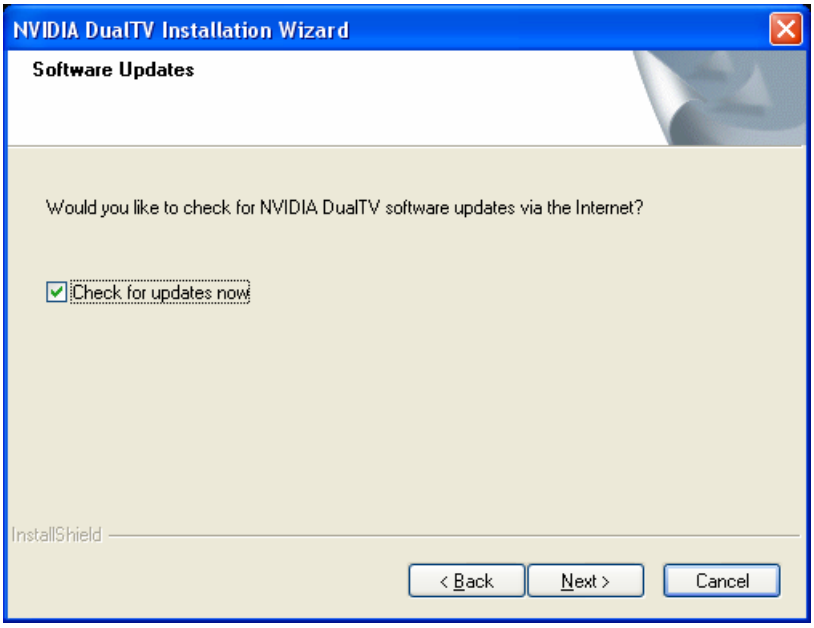
Note: The tuner called out in screen message above is called "DEBUG TV Tuner" for documentation purposes. In your installation, you will see the name of your third-party tuner.


NVIDIA DualTV Installation Wizard
Existing Analog TV Tuner Detected
"DEBUG TV Tuner" tuner card or driver detected
A previously installed analog tuner card or driver may interfere with the NVIDIA DualTV.
Please CANCEL the Installation Wizard and uninstall your previous analog tuner card and driver, or click NEXT to continue with the NVIDIA DualTV installation.
TO UNINSTALL THE PREVIOUS TUNER CARD DRIVER BEFORE REMOVING THE CARD:
From the START menu on the desktop, select ALL PROGRAMS to locate the relevant program group and look for a vendor supplied uninstall utility, or
InstallShield
< Back
Next >
Cancel

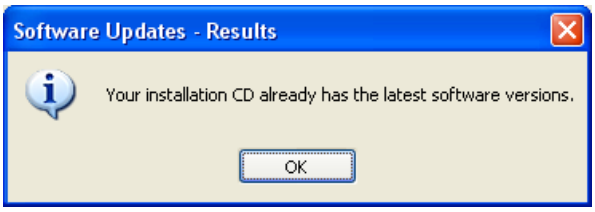
The following will be displayed if you scroll down in the above screen.

NVIDIA DualTV Installation Wizard
Existing Analog TV Tuner Detected
"DEBUG TV Tuner" tuner card or driver detected
THE CARD:
From the START menu on the desktop, select ALL PROGRAMS to locate the relevant program group and look for a vendor supplied uninstall utility, or
From the START menu, select CONTROL PANEL, then select ADD OR REMOVE PROGRAMS and look for a vendor supplied uninstall utility, or
From the START menu, select in this order: CONTROL PANEL -> SYSTEM -> HARDWARE -> DEVICE MANAGER -> SOUND, VIDEO AND GAME CONTROLLERS. Then DOUBLE-CLICK on the listed previous tuner device. Select DRIVER -> UNINSTALL.
InstallShield
< Back
Next >
Cancel

6. Select the option to check for availability of updated software from NVIDIA. This option requires that you have an Internet connection.

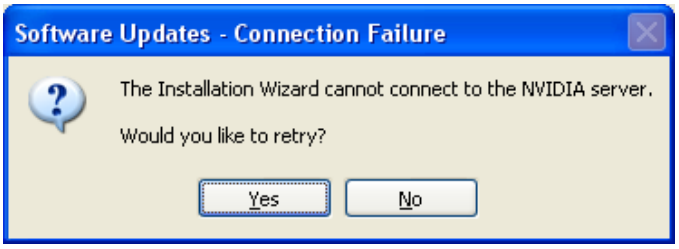

NVIDIA DualTV Installation Wizard
Software Updates
Would you like to check for NVIDIA DualTV software updates via the Internet?
Check for updates now
InstallShield
< Back
Next >
Cancel

- If the NVIDIA server detects that your NVIDIA DualTV CD already has the latest software versions, the following message is displayed.



The following message is displayed if your Internet link is down or if the NVIDIA server is unavailable.

Click **Yes** to retry the connection to the NVIDIA server or **No** to skip the retry.

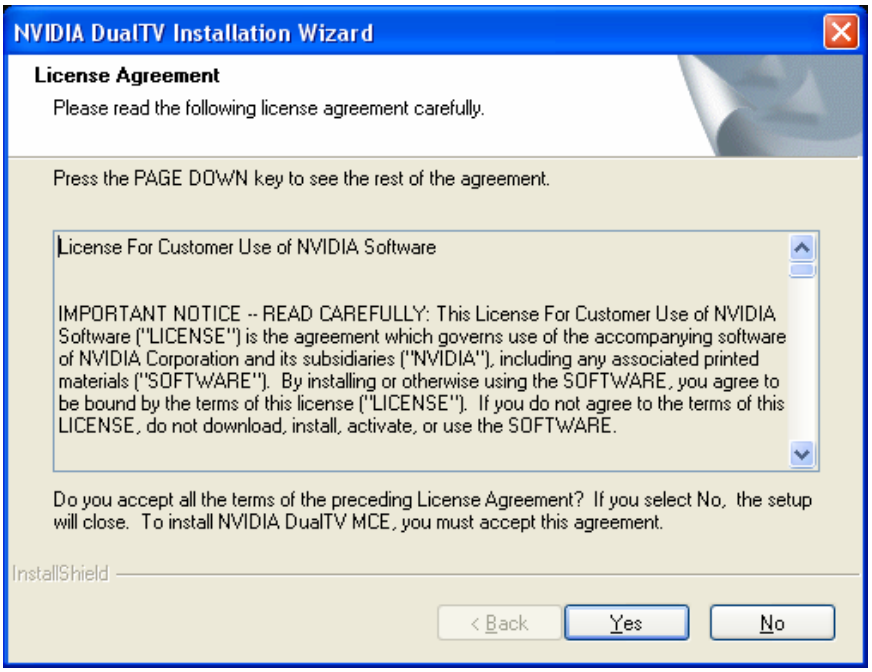

Software Updates - Connection Failure
The Installation Wizard cannot connect to the NVIDIA server.
Would you like to retry?
Yes
No

If your system fails to link to the NVIDIA server, you can download driver updates later by visiting:

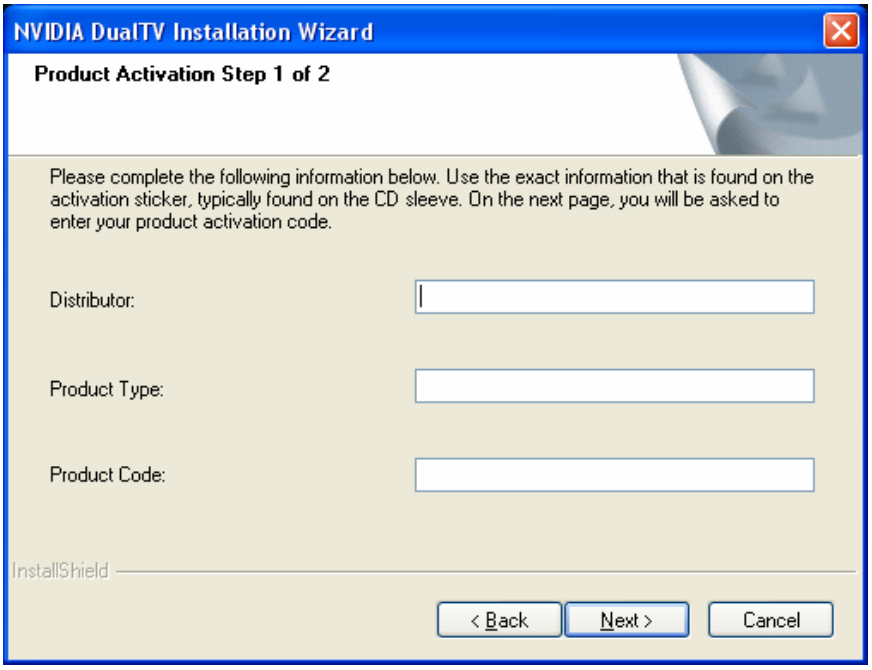
http://www.nvidia.com/content/drivers/drivers.asp

Either the newly retrieved software version or the version on the NVIDIA DualTV CD will be used for the rest of the installation.

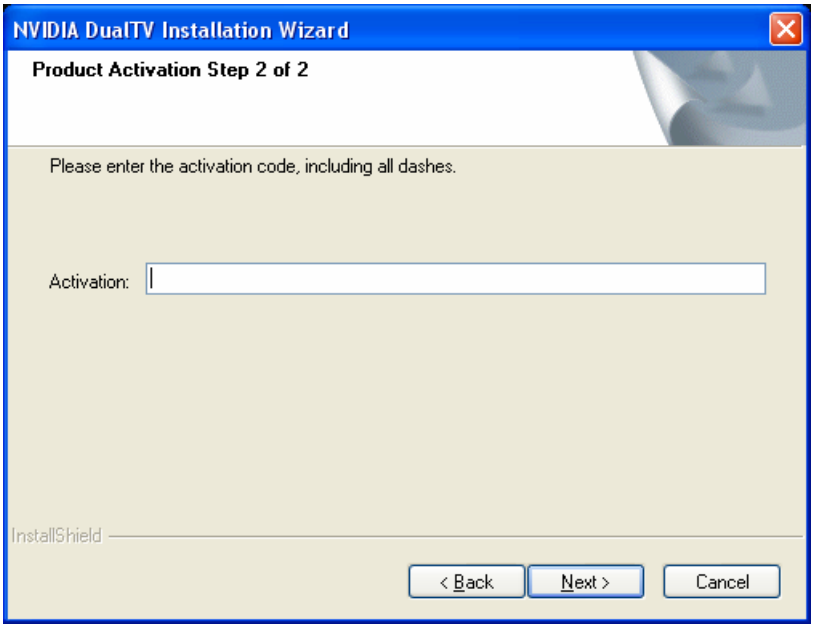
7. Read and accept the NVIDIA PureVideo decoder License Agreement as displayed. The following screen is displayed if you have selected **PureVideo Decoder** in the selection of components to install. Click **Yes** to proceed. If you click **No,** you are terminating the software installation.


NVIDIA DualTV Installation Wizard
License Agreement
Please read the following license agreement carefully.
Press the PAGE DOWN key to see the rest of the agreement.
License For Customer Use of NVIDIA Software
IMPORTANT NOTICE -- READ CAREFULLY: This License For Customer Use of NVIDIA Software ("LICENSE") is the agreement which governs use of the accompanying software of NVIDIA Corporation and its subsidiaries ("NVIDIA"), including any associated printed materials ("SOFTWARE"). By installing or otherwise using the SOFTWARE, you agree to be bound by the terms of this license ("LICENSE"). If you do not agree to the terms of this LICENSE, do not download, install, activate, or use the SOFTWARE.
Do you accept all the terms of the preceding License Agreement? If you select No, the setup will close. To install NVIDIA DualTV MCE, you must accept this agreement.
InstallShield
< Back
Yes
No

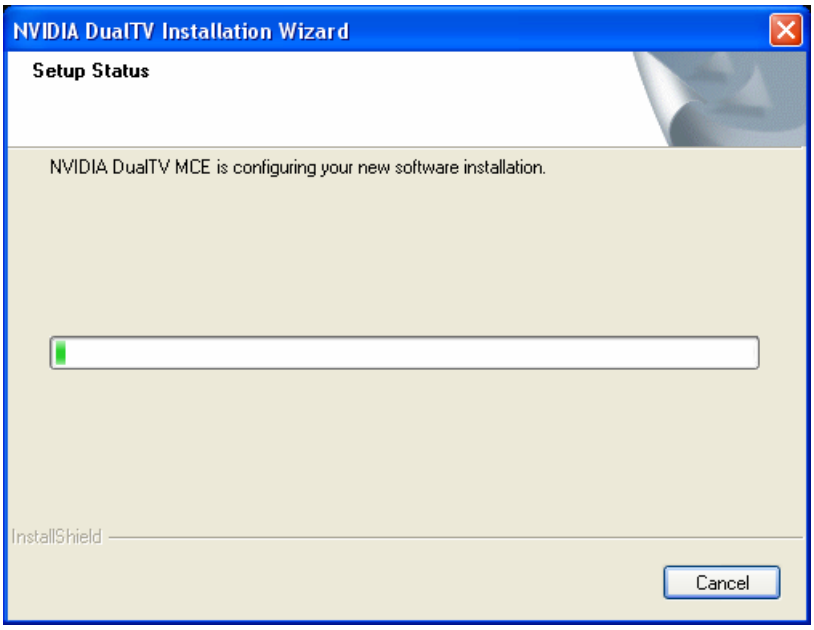
- Enter the Product Information for the NVIDIA PureVideo decoder. The information is on the label on the back of the CD sleeve.


NVIDIA DualTV Installation Wizard
Product Activation Step 1 of 2
Please complete the following information below. Use the exact information that is found on the activation sticker, typically found on the CD sleeve. On the next page, you will be asked to enter your product activation code.
Distributor:
Product Type:
Product Code:
InstallShield
< Back
Next >
Cancel

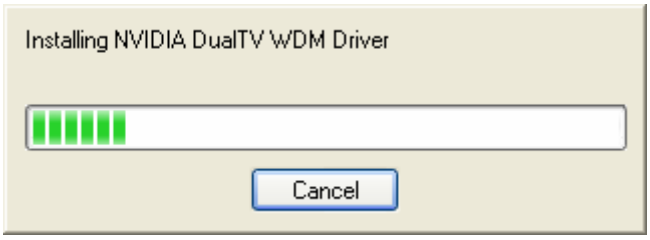
- Enter the Activation Code. The information is on the label on the back of the CD sleeve.

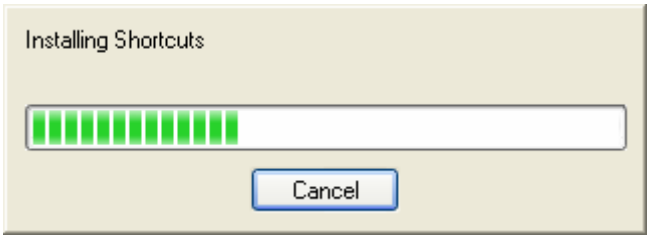


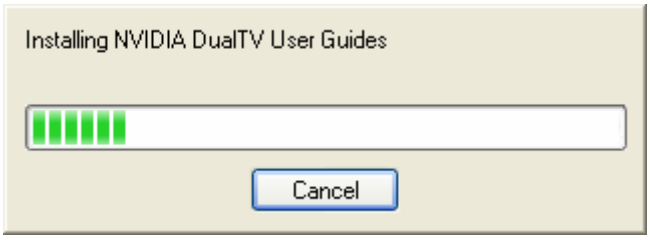
- The wizard completes the installation of the NVIDIA PureVideo decoder.



8. The other components are installed depending on your selection of components to install in a previous screen. The following screens appear.



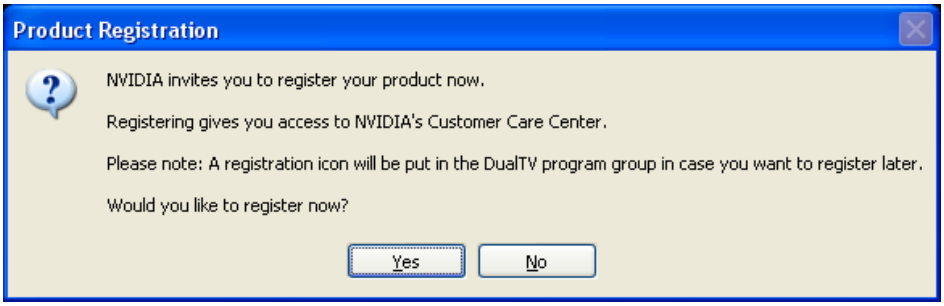




Depending on the NVIDIA DualTV package, multiple language versions of the NVIDIA DualTV User's Guide will be copied to your hard disk.

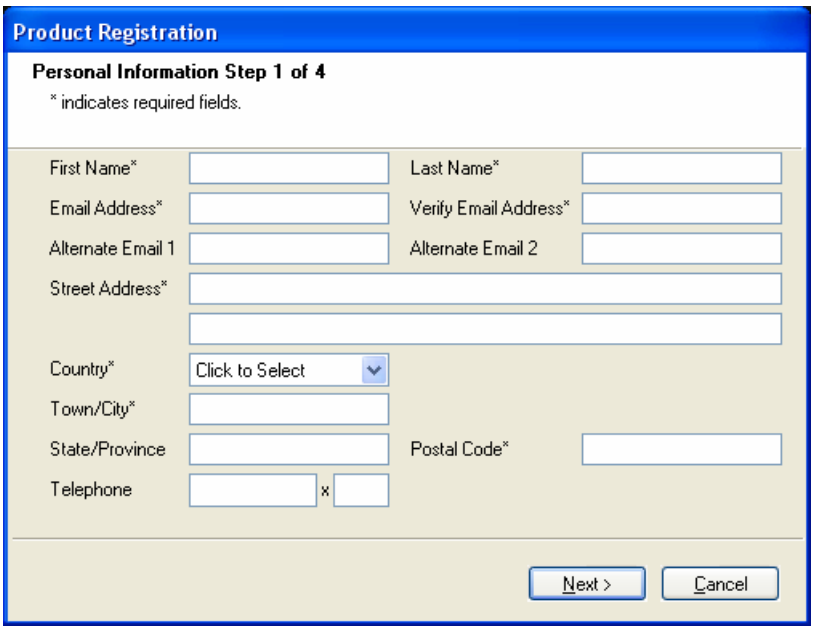
9. Click **Yes** to register your NVIDIA DualTV product via the Internet or a direct dial-up line.

Note: This prompt is not displayed if you have already run the installation wizard and completed the registration process before.

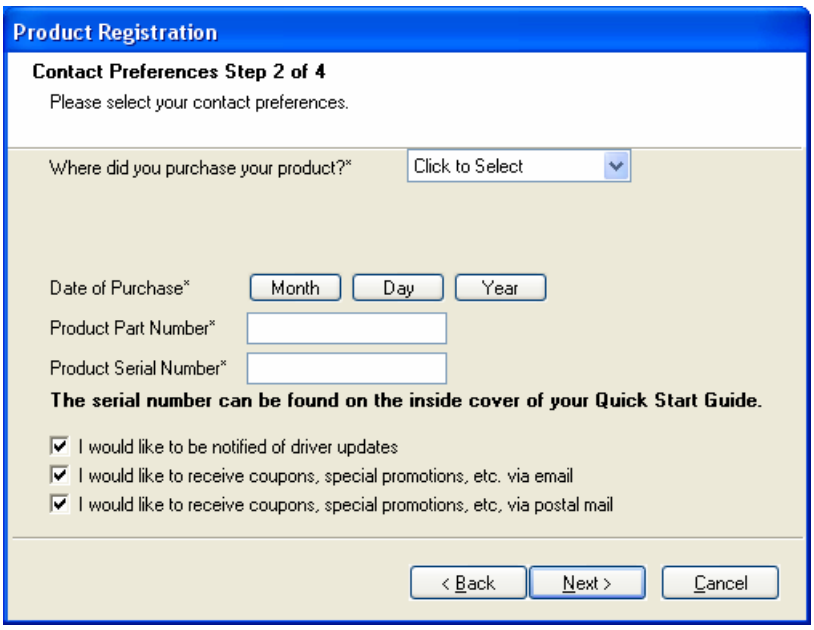

Product Registration
NVIDIA invites you to register your product now.
Registering gives you access to NVIDIA's Customer Care Center.
Please note: A registration icon will be put in the DualTV program group in case you want to register later.
Would you like to register now?
Yes
No

Note: If you click **Cancel** during the registration process, only the product registration is cancelled. The software installation remains intact.

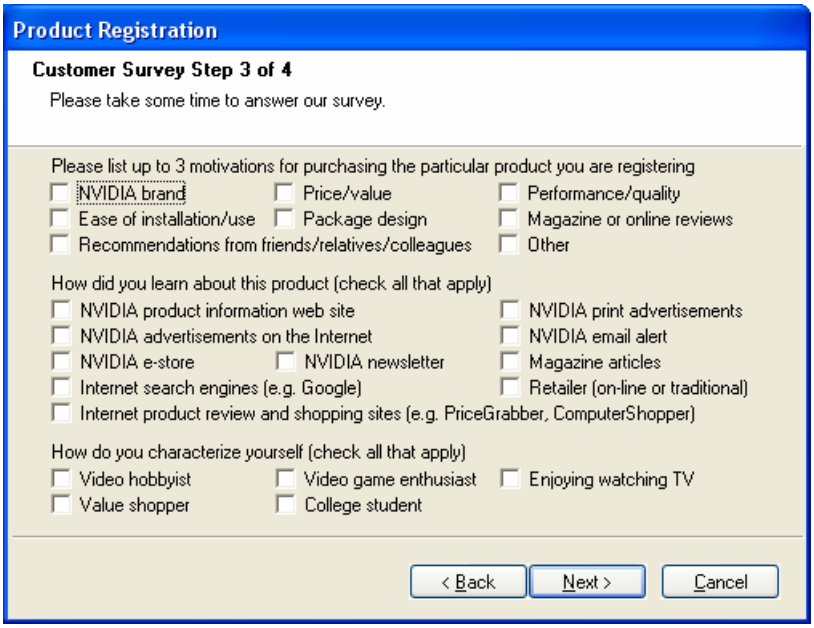
- Fill in your contact information.



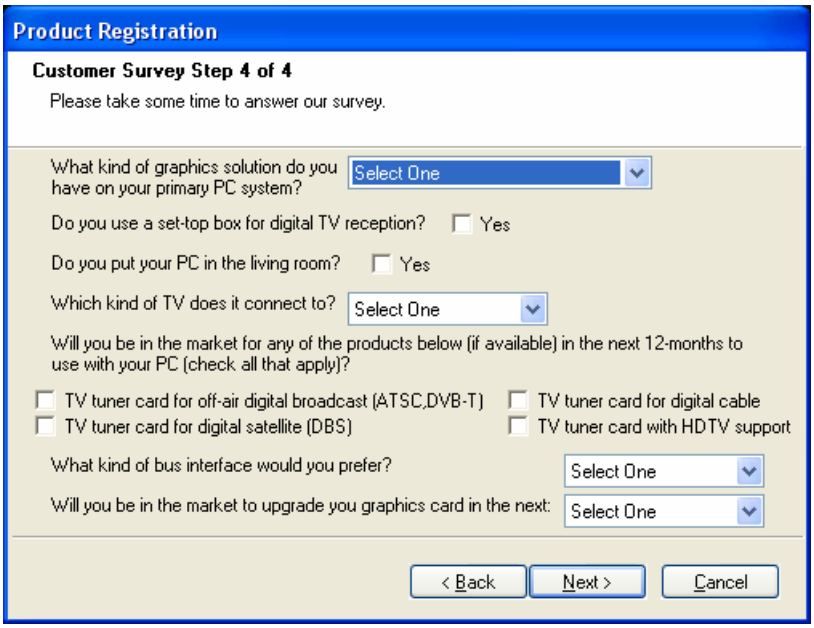
- Fill in the information relevant to your NVIDIA DualTV purchase. The product part number and serial number can be found on the inside cover of the NVIDIA DualTV MCE Quick Start Guide. NVIDIA recommends that you stay current by signing up for the auto-notification service about products, promotions, and software updates.


Product Registration
Contact Preferences Step 2 of 4
Please select your contact preferences.
Where did you purchase your product?*
Click to Select
Date of Purchase*
Month
Day
Year
Product Part Number*
Product Serial Number*
The serial number can be found on the inside cover of your Quick Start Guide.
I would like to be notified of driver updates
I would like to receive coupons, special promotions, etc. via email
I would like to receive coupons, special promotions, etc, via postal mail
< Back
Next >
Cancel

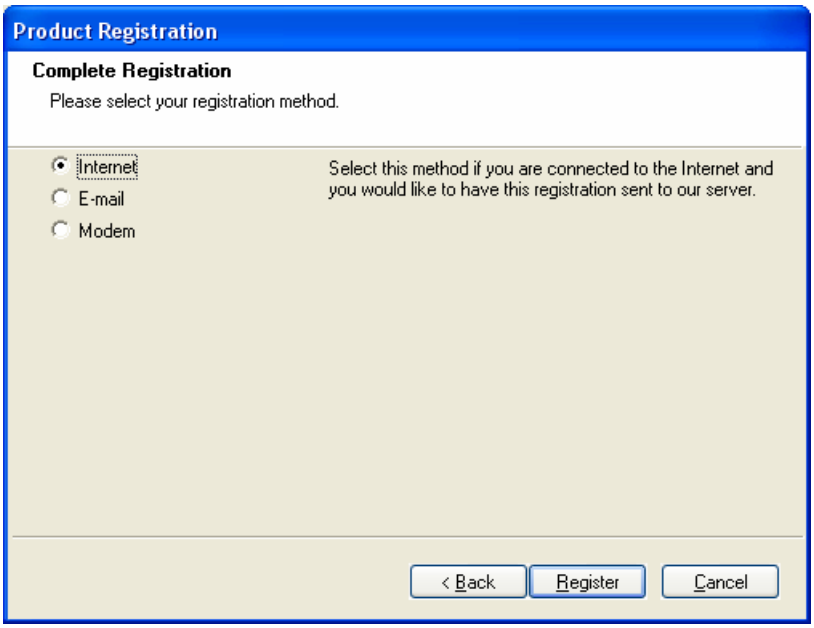
- Complete the survey.


Product Registration
Customer Survey Step 3 of 4
Please take some time to answer our survey.
Please list up to 3 motivations for purchasing the particular product you are registering
NVIDIA brand
Price/value
Performance/quality
Ease of installation/use
Package design
Magazine or online reviews
Recommendations from friends/relatives/colleagues
Other
How did you learn about this product (check all that apply)
NVIDIA product information web site
NVIDIA print advertisements
NVIDIA advertisements on the Internet
NVIDIA email alert
NVIDIA e-store
NVIDIA newsletter
Magazine articles
Internet search engines (e.g. Google)
Retailer (on-line or traditional)
Internet product review and shopping sites (e.g. PriceGrabber, ComputerShopper)
How do you characterize yourself (check all that apply)
Video hobbyist
Video game enthusiast
Enjoying watching TV
Value shopper
College student
< Back
Next >
Cancel

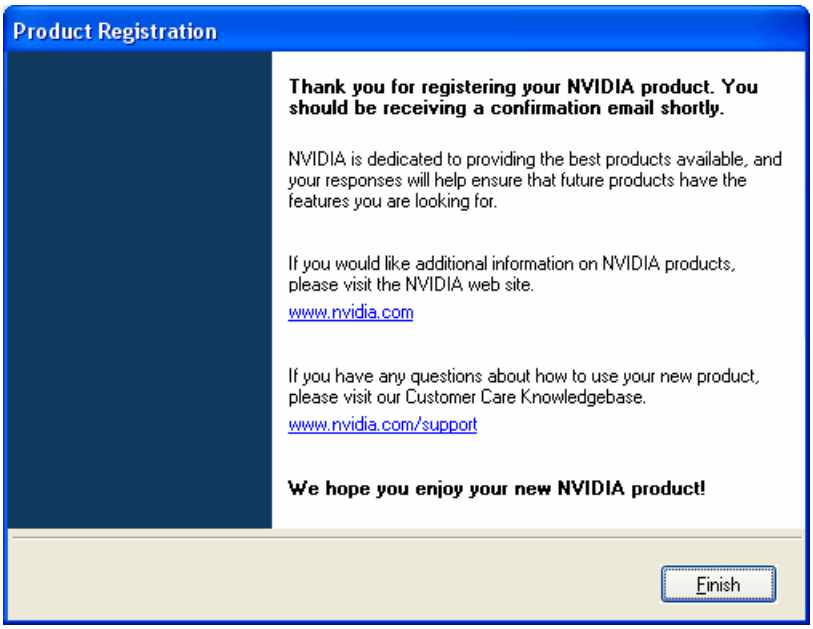
- Complete the 2nd page of the survey.


Product Registration
Customer Survey Step 4 of 4
Please take some time to answer our survey.
What kind of graphics solution do you have on your primary PC system?
Select One
Do you use a set-top box for digital TV reception?
Yes
Do you put your PC in the living room?
Yes
Which kind of TV does it connect to?
Select One
Will you be in the market for any of the products below (if available) in the next 12-months to use with your PC (check all that apply)?
TV tuner card for off-air digital broadcast (ATSC,DVB-T)
TV tuner card for digital cable
TV tuner card for digital satellite (DBS)
TV tuner card with HDTV support
What kind of bus interface would you prefer?
Select One
Will you be in the market to upgrade you graphics card in the next:
Select One
< Back
Next >
Cancel

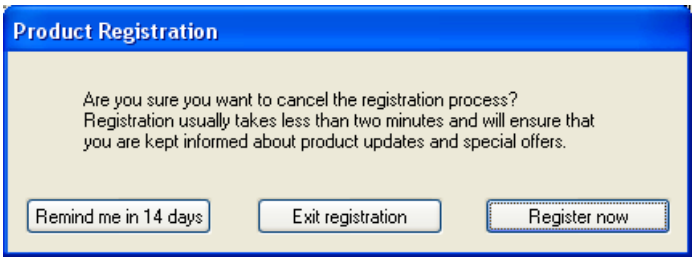
- Select the method to transmit the registration data to NVIDIA, and click **Register**. For the **Internet** and **E-mail** options, an active Internet connection is required. For **Modem**, a direct dial-up line using a toll-free number to the NVIDIA server is used.



- If the data transmission is successful, the following normal completion screen is displayed. You will receive a confirmation e-mail containing logon information for your NVIDIA Customer Care account and information on accessing NVIDIA Customer Care.


Product Registration
Thank you for registering your NVIDIA product. You should be receiving a confirmation email shortly.
NVIDIA is dedicated to providing the best products available, and your responses will help ensure that future products have the features you are looking for.
If you would like additional information on NVIDIA products, please visit the NVIDIA web site.
www.nvidia.com
If you have any questions about how to use your new product, please visit our Customer Care Knowledgebase.
www.nvidia.com/support
We hope you enjoy your new NVIDIA product!
Finish

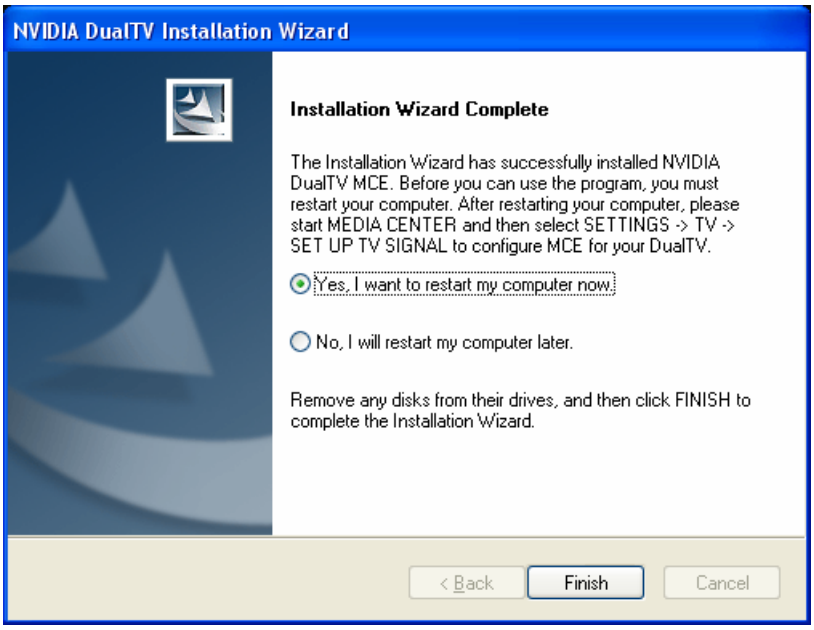
- If you click **Cancel** during the registration process, the following screen is displayed. Canceling the registration does not roll back the software installed in earlier steps. If you select **Register Now** in this screen the registration wizard will return to the **Complete Registration** screen (where you select the option among **Internet/E-mail/Modem**). If you select either **Exit registration** or **Remind me in 14 days**, the wizard goes to the normal registration completion screen.


Product Registration
Are you sure you want to cancel the registration process?
Registration usually takes less than two minutes and will ensure that you are kept informed about product updates and special offers.
Remind me in 14 days
Exit registration
Register now

10. Select the "**Yes, I want to restart my computer now**" option in the screen below. This "**Installation Wizard Complete**" screen is displayed whether you have completed the registration process or not. A program group is created in the Windows **Start** menu with shortcuts and uninstall utilities.

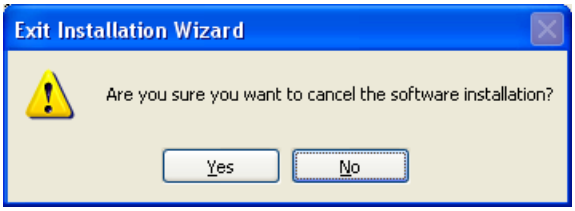
Note: The software installation is fully complete only after the PC is restarted.

After restarting your PC, configure your tuner in MCE as described in the next chapter.

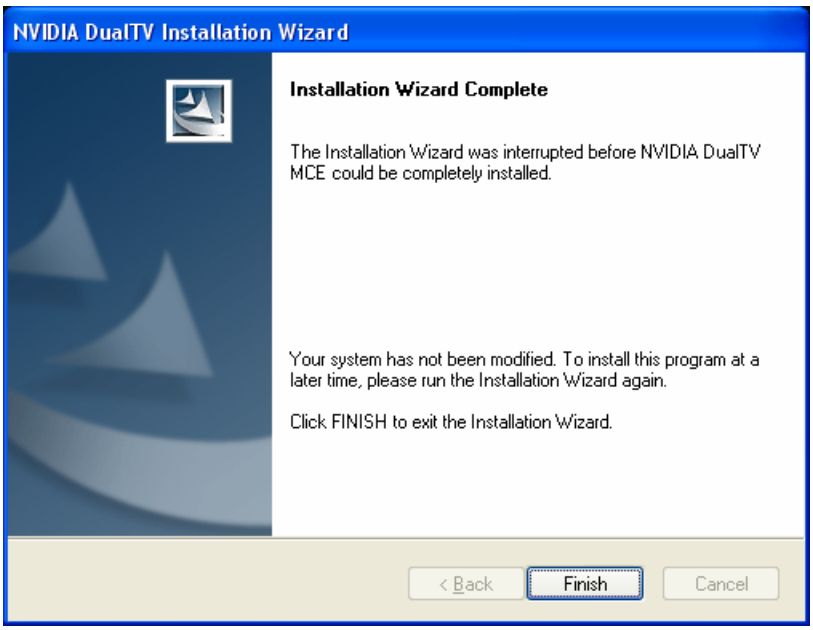

NVIDIA DualTV Installation Wizard
Installation Wizard Complete
The Installation Wizard has successfully installed NVIDIA DualTV MCE. Before you can use the program, you must restart your computer. After restarting your computer, please start MEDIA CENTER and then select SETTINGS -> TV -> SET UP TV SIGNAL to configure MCE for your DualTV.
Yes, I want to restart my computer now.
No, I will restart my computer later.
Remove any disks from their drives, and then click FINISH to complete the Installation Wizard.
< Back
Finish
Cancel

Abnormal Termination

If you click **Cancel** at any time during the software installation before the registration step, or **No** in the NVIDIA PureVideo decoder **License Agreement** screen, the following screen is displayed.



If you click **Yes**, the installation wizard exits with the following screen. The software installed in prior steps is uninstalled.


NVIDIA DualTV Installation Wizard
Installation Wizard Complete
The Installation Wizard was interrupted before NVIDIA DualTV MCE could be completely installed.
Your system has not been modified. To install this program at a later time, please run the Installation Wizard again.
Click FINISH to exit the Installation Wizard.
< Back
Finish
Cancel

Configuring the Tuners in Microsoft Windows XP Media Center Edition

If you have any problems with MCE, please consult the documentation associated with MCE. For more information on configuring or using Microsoft Windows XP Media Center Edition, please visit http://www.microsoft.com/windowsxp/mediacenter/default.mspx.

Setting Up a TV Tuner in MCE

With the hardware and software installed, you need to set-up the TV tuners to receive the TV signals in your area. Upon initial power-on, the MCE application may launch automatically. If it does, begin with Step 2. If it does not launch, begin with Step 1. If you would like to manually configure the tuners, see *Configuring Tuners Manually* on page 32.

Note: If you intend to use your set-top box with MCE (i.e. using the set-top box as a TV receiver/tuner and NVIDIA DualTV as the A/V capture device), you need to have an MCE-compatible remote control/receiver with IR blaster(s). The latter controls the set-top box to change channels. You would need to plug in the remote receiver to your MCE PC before you configure the tuners.

Configuring Tuners Automatically

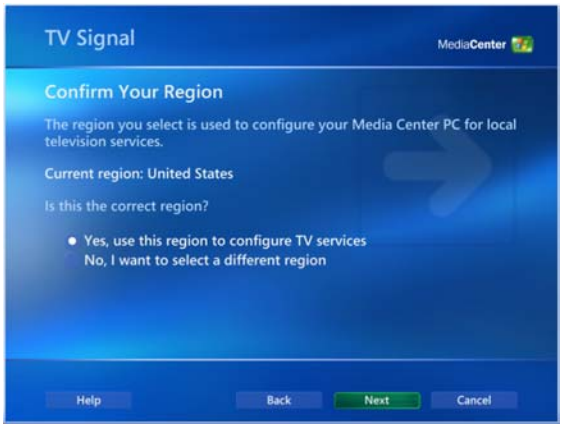
1. Go to **Start** and select **Media Center** to launch the application.

2. Select **Settings**.

3. Select **TV**.

4. Select **Set-up TV Signal** and then click **Next**.

5. Confirm your region to configure for local television service.


TV Signal
MediaCenter
Confirm Your Region
The region you select is used to configure your Media Center PC for local television services.
Current region: United States
Is this the correct region?
Yes, use this region to configure TV services
No, I want to select a different region
Help
Back
Next
Cancel

6. At this point, you can automatically configure your TV signals or manually configure them. It is recommended to automatically configure the signals. Make a selection and click **Next**.

> **Note:** Go to the MCE Web site for information on whether automatic configuration is available for your country.

TV Signal
MediaCenter
Automatic TV Signal Setup
Media Center can automatically detect and configure your TV signal in most cases. This process may take as long as five minutes depending upon your configuration.
How would you like to proceed?
Configure my TV signal automatically (Recommended)
I will manually configure my TV signal
Help
Back
Next
Cancel

Click **Next**.

TV Signal
MediaCenter
Prepare for Automatic Signal Configuration
In order for automatic signal configuration to be successful, please ensure the following:
• If you receive your TV signal from an antenna or a direct cable connection, ensure that it is connected to the appropriate connectors on your tuners.
• If you receive your TV signal through a set-top box, ensure that it is connected to your tuners, powered on, and tuned to a channel you receive.
• Media Center works best with two tuners although it still functions with only one. Each tuner must have its own connection and set-top box (if applicable).
Help
Back
Next
Cancel

7. Click **Yes** to continue. MCE has determined your system configuration and asks if you want to continue to configure the TV signal using the results it found.

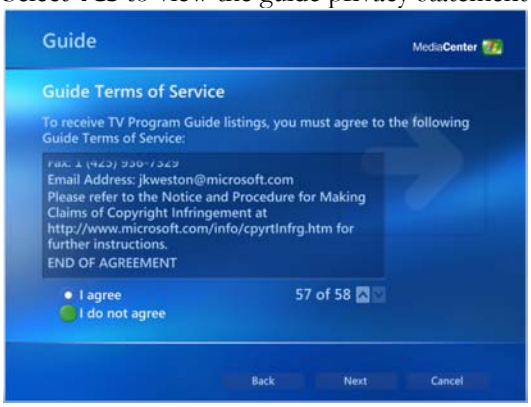
TV Signal
MediaCenter
TV Signal Configuration Result
A TV signal was detected that indicates you may have the following configuration:
TV Signal: Cable
Number of connections: 2
Would you like to configure your TV signal using these results?
Yes
No, I want to try again
No, proceed to manual TV signal setup
Help
Back
Next
Cancel

8. You are done with the TV signal portion of the setup.

TV Signal
MediaCenter
You Are Done!
You have configured your TV Signal to work with Media Center. The following settings will be saved:
TV Signal: Cable or digital cable
Making changes to your TV signal source may require you to reset your TV Program Guide listings. Select Set Up Guide listings to do this now, or select Return to TV Settings to finish.
Set Up Guide listings
Return to TV Settings
Help
Back
Finish

Select **Set Up Guide Listing** to setup the TV station guide and then click **Next**.

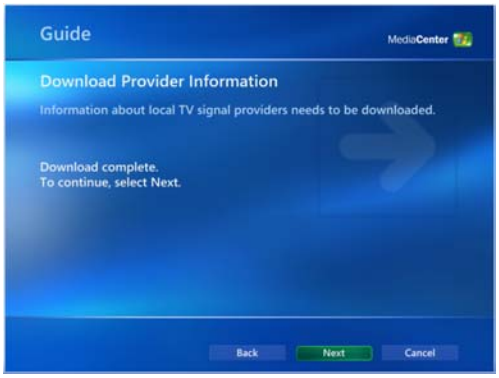
9. Select **Yes** to view the guide privacy statement and accept the agreement.


Guide
MediaCenter
Guide Terms of Service
To receive TV Program Guide listings, you must agree to the following Guide Terms of Service:
Email Address: jkweston@microsoft.com
Please refer to the Notice and Procedure for Making Claims of Copyright Infringement at http://www.microsoft.com/info/cpyrtInfrg.htm for further instructions.
END OF AGREEMENT
I agree
I do not agree
57 of 58
Back
Next
Cancel

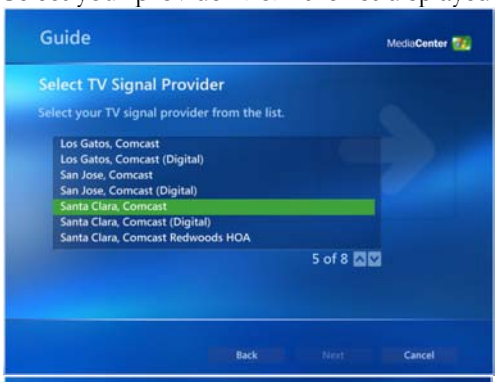
Select **I Agree** and click **Next**.

10. Enter your postal or ZIP code so the proper guide information for your area can be downloaded.

Click **Next**.

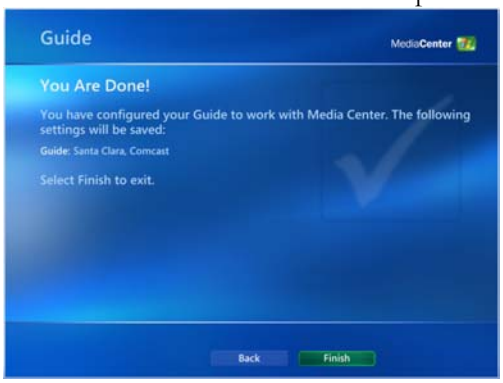


11. Select your provider from the list displayed.



Guide
MediaCenter
Download TV Program Guide Information
The Guide provides TV listings to help you find, watch, and record TV shows. It can contain up to 14 days of TV listings at a time.
Status: Downloading. This may take a few minutes..
Back
Next
Cancel

12. **You Are Done!** Select **Finish** to complete the configuration.

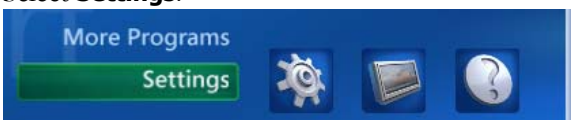


Configuring Tuners Manually

MCE allows you to manually configure all settings associated with your tuners. To manually configure the tuners, use the following procedure. Otherwise, you can configure the tuners automatically (page 27).

1. Go to **Start** and select **Media Center** to launch the application.

2. Select **Settings**.

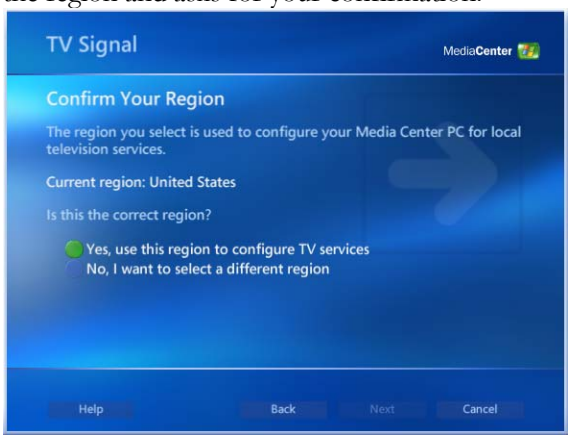


3. Select **TV**.

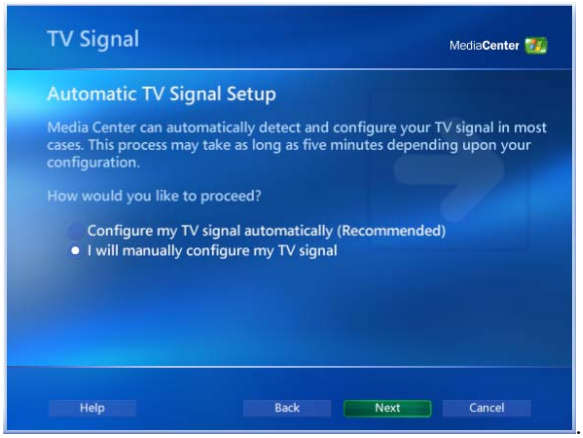
4. Select **Set Up TV Signal**.

5. Click **Next** to begin setting up your signal.

6. Confirm the region that you will be receiving the TV signal. MCE determines the region and asks for your confirmation.


TV Signal
MediaCenter
Confirm Your Region
The region you select is used to configure your Media Center PC for local television services.
Current region: United States
Is this the correct region?
Yes, use this region to configure TV services
No, I want to select a different region
Help
Back
Next
Cancel

7. Select **I will manually configure my TV signal** and click **Next**.


TV Signal
MediaCenter
Automatic TV Signal Setup
Media Center can automatically detect and configure your TV signal in most cases. This process may take as long as five minutes depending upon your configuration.
How would you like to proceed?
Configure my TV signal automatically (Recommended)
I will manually configure my TV signal
Help
Back
Next
Cancel

.

8. Select your TV signal type and click **Next**.

9. Specify if you have a set-top box that you will be connecting to your MCE computer. Click **Next**.

TV Signal
MediaCenter
Do You Have a Set-top Box?
Sometimes a controller box, or "set-top box" is used to receive a TV signal. If you have a set-top box, the Media Center remote control needs to work with it. Do you have a set-top box?
Yes
No
Help
Back
Next
Cancel

10. Select the tuner(s) to be configured.
With the NVIDIA DualTV tuner card, you have two tuners. You want to configure *both* tuners. Make sure both tuners are checked.

TV Signal
MediaCenter
Which Tuners Do You Want to Configure?
You can set up either one or two tuners for use with Media Center. With two tuners, Media Center can enable you to watch TV on one channel while recording from another. Which tuner or tuners do you want to configure now?
NVIDIA DualTV Tuner
NVIDIA DualTV Tuner 2
Help
Back
Next
Cancel

Click **Next**.

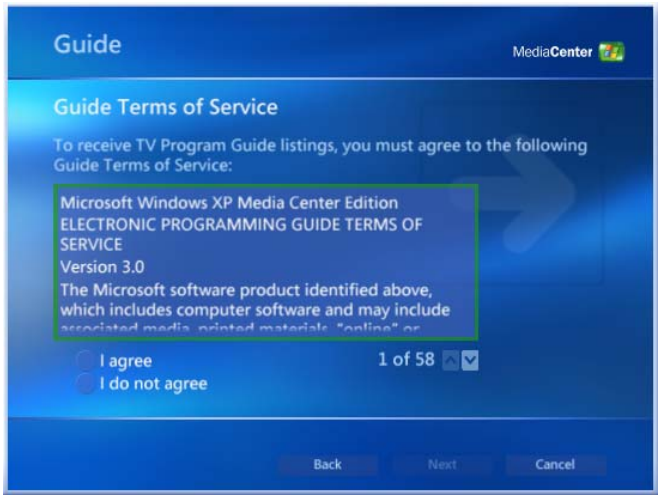
11. Select **Set Up Guide Listing** to manually set up your online TV Guide and click **Next**.

TV Signal
MediaCenter
You Are Done!
You have configured your TV Signal to work with Media Center. The following settings will be saved:
TV Signal: Cable or digital cable
Making changes to your TV signal source may require you to reset your TV Program Guide listings. Select Set Up Guide listings to do this now, or select Return to TV Settings to finish.
Set Up Guide listings
Return to TV Settings
Help
Back
Next

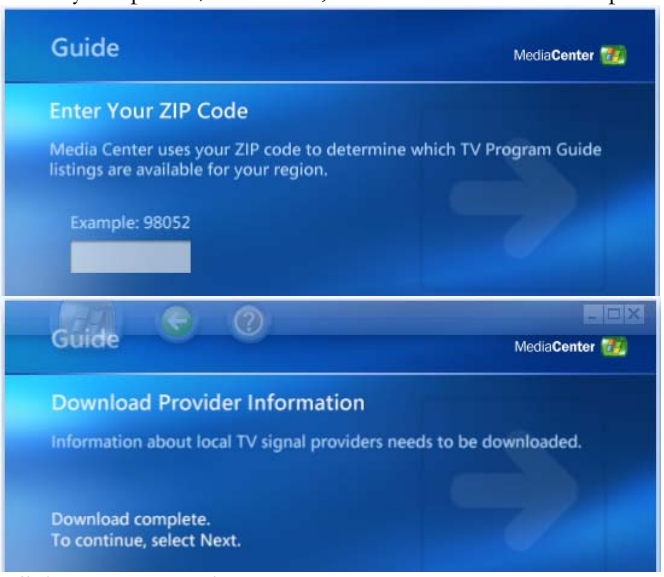
Click **Next** again to continue.

12. Select **Yes** to continue to use the guide and click **Next** to continue.

13. Read and accept the terms by selecting **I Agree** and click **Next** to continue.


Guide
MediaCenter
Guide Terms of Service
To receive TV Program Guide listings, you must agree to the following Guide Terms of Service:
Microsoft Windows XP Media Center Edition
ELECTRONIC PROGRAMMING GUIDE TERMS OF SERVICE
Version 3.0
The Microsoft software product identified above, which includes computer software and may include
I agree
I do not agree
1 of 58
Back
Next
Cancel

14. Enter your postal/ZIP code, click **Next** to download provider information.


Guide
MediaCenter
Enter Your ZIP Code
Media Center uses your ZIP code to determine which TV Program Guide listings are available for your region.
Example: 98052
Guide
MediaCenter
Download Provider Information
Information about local TV signal providers needs to be downloaded.
Download complete.
To continue, select Next.

Click **Next** to continue.

15. Select a provider that best fits your location.

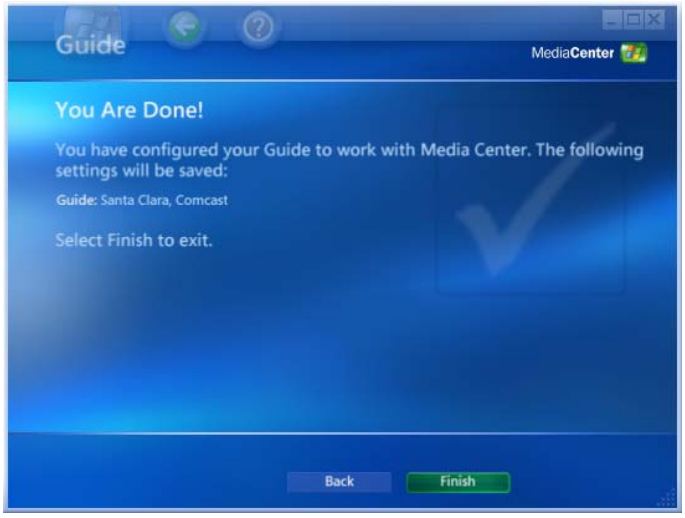
Click **Next** to download your TV Program Guide information.

Guide
MediaCenter
Download TV Program Guide Information
The Guide provides TV listings to help you find, watch, and record TV shows. It can contain up to 14 days of TV listings at a time.
Status: Downloading. This may take a few minutes..
Back
Next
Cancel

Click **Next** to continue.

Guide
MediaCenter
Download TV Program Guide Information
The Guide provides TV listings to help you find, watch, and record TV shows. It can contain up to 14 days of TV listings at a time.
Download complete.
To continue, select Next.
Back
Next
Cancel

Click **Next** to continue.



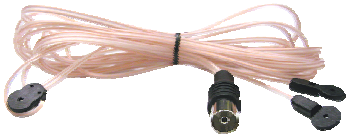
Congratulations, you have successfully downloaded the online TV programming guide. Click **Finish** to complete the process.

This completes the tuner configuration in MCE.

Setting Up the Radio

Note: The TV must be set up prior to setting up the radio.

Be sure you have the FM antenna cable connected to the FM connector on your NVIDIA DualTV tuner card.



FM Antenna Cable (included in the kit).
Note: Actual cable may vary from picture shown.

1. Go to **Start** and select **Media Center** to launch the application.

2. Select **Settings**

3. Select **Radio**.

4. Configure your favorite station to load the FM radio presets.

If you do not see the **Radio** menu item in the MCE main menu, do the following after you have closed the MCE application/menu:

1. From the **START** menu on the Windows desktop, select **ALL Programs, then Set Program Access and Defaults**.
2. Click **Custom**, then the down arrow button.
3. Select **Choose A Default Media Player**, click the checkbox for **Media Center Radio.**
4. Click the checkbox for **Enable Access to This Program** for Media Center Radio.

Note: During the above procedure, if the checkbox for **Enable Access to This Program** for Media Center Radio is already checked (i.e. this option is already enabled), de-select this checkbox, close the control panel, then go through the above steps for **Set Program Access and Defaults** again**.**

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Optimizing the Audio and Video Experience

This section contains information on common video problems with instructions on how to correct and repair these problems. In addition, there are settings that help you optimize the audio and video experience, taking full advantage of both MCE and NVIDIA tools.

Antenna/Cable TV Signal Strength

Low Signal Level

In general, NVIDIA does not recommend connecting an additional amplifier or active amplifier/splitter with high gain to the TV cable input.

However, if low signal levels are evident on all channels, check cable/antenna connections and remove any unnecessary splitter devices. If the problem persists, add a powered external amplifier with 5-10dB of gain (consult your local electronics store).

Note the grainy picture and appearance of colored dots where there should be none.

Figure 5. Low Signal Level

High Signal Level

If high signal levels are evident on some or all channels, remove any amplifier devices or reduce their gain. The addition of an amplifier or active amplifier/splitter with high gain to the TV cable input causes excessive noise on the signal resulting in distortion in the TV picture. If the problem persists, add a series RF attenuator (consult your local electronics store).

Note the diagonal lines and horizontal color distortion.

Figure 6. High Signal Level

Adjusting LCD Panels

LCD panels pose special setup challenges for TV viewing. The range of settings for brightness is not as varied compared with a CRT monitor or TV, and the color temperature is usually lower. This can result in imperfect settings even after running the Media Center calibration.

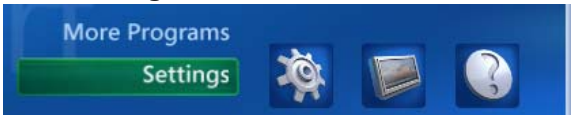
Each LCD panel is different. What works for one panel may not work for another. Factory defaults are a reasonably reliable way of achieving adequate results, but the best method is trial and error by the user for the best individual results.

Go through the process given under *Adjusting Your Monitor or TV* on page 42. Make all the necessary adjustments until you are satisfied with the results.

Adjusting Your Monitor or TV

TV or monitor settings play a large part in the overall viewing experience. To achieve the best picture possible, you should run the complete Media Center monitor setup utility. Use the following procedure to setup your monitor or TV.

1. Go to **Start** and select **Media Center** to launch the application.
2. Select **Settings**.



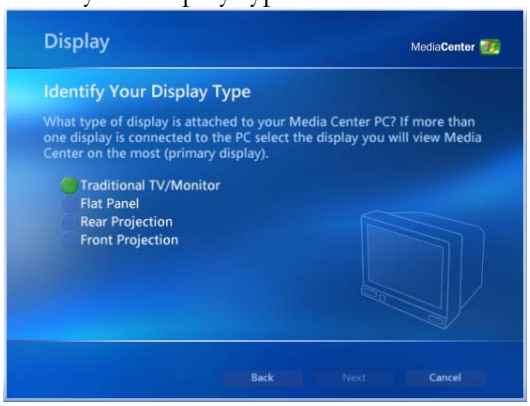
3. Select **TV**.

4. Select **Configure Your TV or Monitor**.

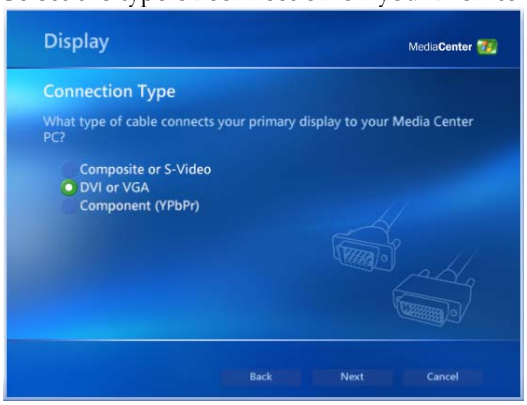
The following screen displays explaining how the wizard works. Click **Next** to continue.

Display
MediaCenter
Display Configuration
Use this wizard to change settings that affect the way Media Center looks on your display.
First, you can choose to have Media Center adjust its settings based on information you provide about your display type. Then, you can adjust your display's settings to make Media Center look its best.
Watch Video
Next
Cancel

5. Select your display type and click **Next** to continue.


Display
MediaCenter
Identify Your Display Type
What type of display is attached to your Media Center PC? If more than one display is connected to the PC select the display you will view Media Center on the most (primary display).
Traditional TV/Monitor
Flat Panel
Rear Projection
Front Projection
Back
Next
Cancel

6. Select the type of connection on your monitor or TV and click **Next**.

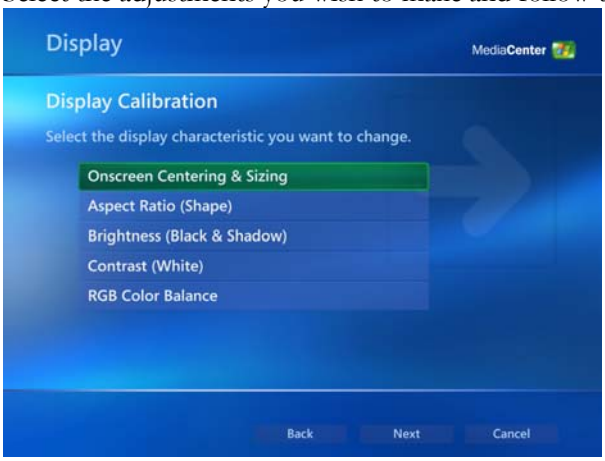


7. Select **Adjust Display Controls** and click **Next**. Click **Next** again to make adjustments.

Display
MediaCenter
Adjust Your Display Settings
Media Center can assist you in using the controls on your display to manually adjust brightness, contrast, and other settings that can improve the appearance of video.
What do you want to do?
Adjust Display Controls
Finish this wizard
Back
Next
Cancel

Display
MediaCenter
Display Calibration
You can make video look as good as possible by adjusting the controls on your display. To see a list of controls you can adjust, select Next.
Back
Next
Cancel

8. Select the adjustments you wish to make and follow the instructions given.



See the following sections to make adjustments to you monitor.

- Centering the Picture on the Screen
- Adjusting the Aspect Ratio
- Adjusting the Brightness (Black & Shadow)
- Adjusting the Contrast (White)
- Adjusting the Color Balance

Centering the Picture on Your Screen

Onscreen Centering and Sizing

Display
MediaCenter
Centering & Sizing
These settings affect where the picture appears on the screen.
Before you start:
Locate the centering and sizing controls for your display.

On a computer monitor, these controls are normally along the bottom of the screen. Consult the user documents for your monitor or TV to locate the controls.

Click **Next** to continue.

Display
MediaCenter
Centering & Sizing
To make the adjustment:
1. Select Watch Video.
2. Adjust your picture using the controls on your display.
3. Make sure your picture matches the inset window, especially along the edges.
Watch Video

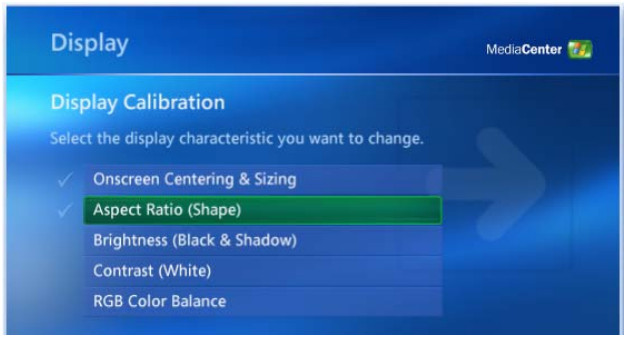
Click **Watch Video**.

The objective is to center the larger picture on your screen so that you see all the edges as shown in the smaller inset picture. Use your monitor or TV adjustment controls to center the picture.

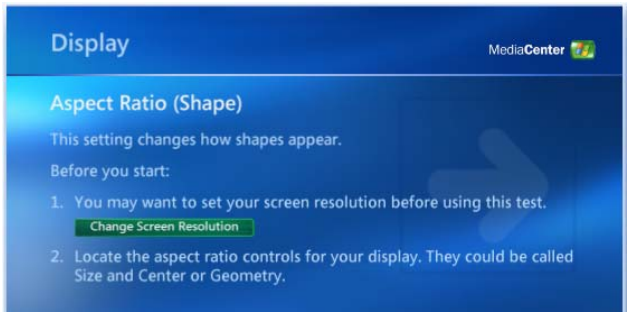
When you are satisfied, click on the MCE **Back** button to return to the previous menu.
Click **Next** on that menu to go back to the Display Calibration menu.

Adjusting the Aspect Ratio

Aspect Ratio



Select **Aspect Ratio (Shape)**.


Display
MediaCenter
Aspect Ratio (Shape)
This setting changes how shapes appear.
Before you start:
1. You may want to set your screen resolution before using this test.
Change Screen Resolution
2. Locate the aspect ratio controls for your display. They could be called Size and Center or Geometry.

If you feel you need to change your screen resolution, click **Change Screen Resolution** to display the Display Properties window. Adjust the resolution per your computer documentation.

Locate the adjustment controls for your TV or monitor and click **Next** to continue.

Display
MediaCenter
Aspect Ratio (Shape)
To make the adjustment:
1. Select Watch Video.
2. Adjust your picture using the controls on your display.
3. Make sure the cube of chalk looks square and that the billiard balls look round.
Watch Video

To adjust the Aspect Ratio, click **Watch Video** and adjust the controls as necessary.

Make sure the cube of chalk is square and the billiard balls look round.

When you are satisfied, click on the MCE **Back** button to return to the previous menu.
Click **Next** on that menu to go back to the Display Calibration menu.

Picture Too Dark

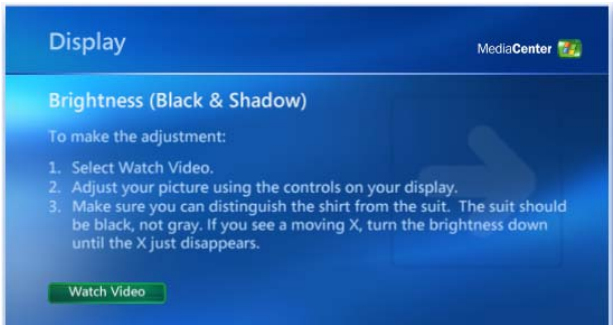
If your picture is too dark, you need to adjust the Brightness (Black & Shadow). Brightness controls the dark and shadowed areas of the screen. Incorrect settings may cause a black screen to look grey or lose detail in shadowy areas of the screen.

To adjust the color balance, go to **Settings➢ TV➢ Configure Your TV or Monitor.** Select your monitor type and connection (see *Adjusting Your Monitor or TV* on page 42). From the Display Calibration menu, select **Brightness (Black & Shadow)**.

From the Display Calibration window, select **Brightness (Black & Shadow)**.
Click **Next** to continue.

Display
MediaCenter
Brightness (Black & Shadow)
This setting affects the clarity of the dark colors and shadows.
Before you start:
Locate the brightness control for your display device. It could be labeled Brightness or Black Level.

Locate the brightness controls for your monitor or TV. Click **Next** to continue.


Display
MediaCenter
Brightness (Black & Shadow)
To make the adjustment:
1. Select Watch Video.
2. Adjust your picture using the controls on your display.
3. Make sure you can distinguish the shirt from the suit. The suit should be black, not gray. If you see a moving X, turn the brightness down until the X just disappears.
Watch Video

To adjust the Brightness, click **Watch Video** and adjust the controls as necessary.

Too dark: Suit, shirt, and background blend

Make sure you can distinguish the black shirt from the black background.

When you are satisfied, click on the MCE **Back** button to return to the previous menu.
Click **Next** on that menu to go back to the Display Calibration menu.

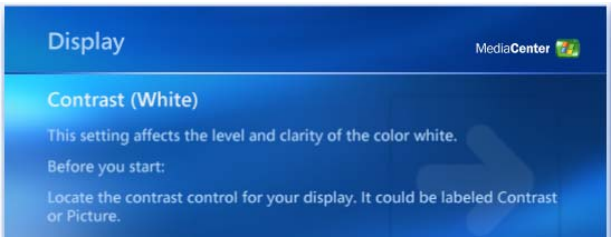
Correct: Blacks can be distinguished

Picture Too Light

If your picture is too light, you need to adjust the Contrast (White). Contrast controls the intensity of the white signal of your display. If contrast is set incorrectly, it can cause the picture to appear faded and lose detail in brighter areas of the screen.

To adjust the color balance, go to **Settings➢ TV➢ Configure Your TV or Monitor.** Select your monitor type and connection (see *Adjusting Your Monitor or TV* on page 42). From the Display Calibration menu, select **Contrast (White)**.

From the Display Calibration window, select **Contrast (White).**
Click **Next** to continue.


Display
MediaCenter
Contrast (White)
This setting affects the level and clarity of the color white.
Before you start:
Locate the contrast control for your display. It could be labeled Contrast or Picture.

Locate the contrast controls for your monitor or TV. Click **Next** to continue.

Display
MediaCenter
Contrast (White)
To make the adjustment:
1. Select Watch Video.
2. Adjust your picture using the controls on your display.
3. Set the contrast as high as possible without losing the wrinkles and buttons on the shirt.
Watch Video

To adjust the contrast, click **Watch Video** and adjust the controls as necessary.

When you are satisfied, click on the MCE **Back** button to return to the previous menu. Click **Next** on that menu to go back to the Display Calibration menu.

Contrast too high. Buttons and wrinkles are not sharp

Adjust the contrast as high as possible without losing the wrinkles and buttons on the shirt.

Correct contrast. Buttons and wrinkles are visible

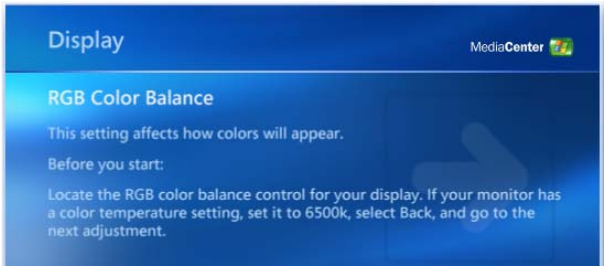
When you are satisfied, click on the MCE **Back** button to return to the previous menu. Click **Next** on that menu to go back to the Display Calibration menu.

Color Balance

Incorrect adjustment of color temperature can cause unwanted color information to appear in black and white pictures or leave the picture with a skewed tint.

To adjust the color balance, go to **Settings➢ TV➢ Configure Your TV or Monitor.** Select your monitor type and connection (see *Adjusting Your Monitor or TV* on page 42). From the Display Calibration menu, select **RGB Color Balance**.

From the Display Calibration window, select **RGB Color Balance**. Click **Next** to continue.


Display
MediaCenter
RGB Color Balance
This setting affects how colors will appear.
Before you start:
Locate the RGB color balance control for your display. If your monitor has a color temperature setting, set it to 6500k, select Back, and go to the next adjustment.

Locate the color controls for your monitor or TV. If there is a color temperature control setting, set it to 6500k. Select **Back** and go to the next adjustment.

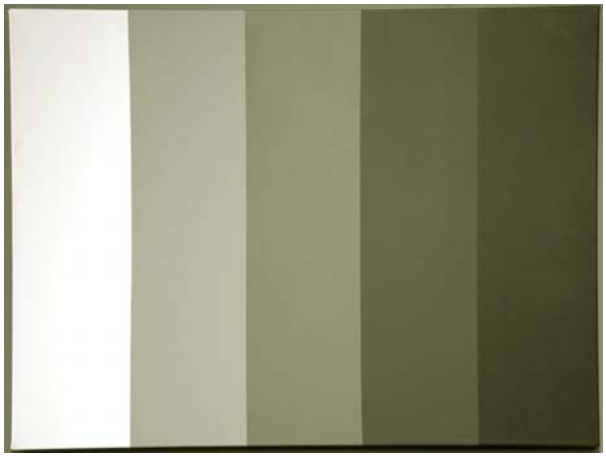
Click **Next** to continue.

Display
MediaCenter
RGB Color Balance
To make the adjustment:
1. Select Watch Video.
2. Adjust your picture using the controls on your display.
3. Make sure none of the gray bars have a tinge of red, green, or blue. You may need to fine tune brightness and contrast after adjusting the color balance.
Watch Video

To adjust the RGB Color Balance, click **Watch Video** and adjust the controls as necessary.

The billiard scene is shown and pans in on the gray panels in the background.

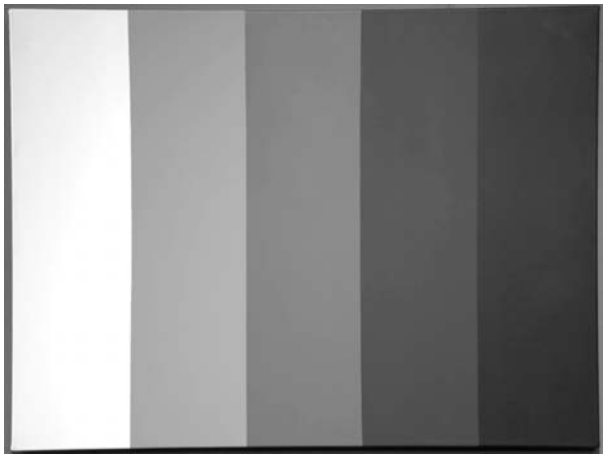
Color temperature too low



Adjust the color so that the gray panels have no tinge of red, green, or blue.

It may be necessary to fine tune brightness and contrast after adjusting the color balance.

Correct color balance



When you are satisfied, click on the MCE **Back** button to return to the previous menu.
Click **Next** on that menu to go back to the Display Calibration menu.

Frequently Asked Questions (FAQs)

This section provides answers to frequently asked questions on set-up and usage of the product. For the most up-to-date information, please consult NVIDIA Customer Care knowledge base available at:

http://nvidia.custhelp.com/cgi-bin/nvidia.cfg/php/enduser/std_alp.php

Note: Use the latest Adobe Acrobat Reader to browse this document and go to the Web links. Visit http://www.adobe.com/acrobat/ for more information on downloading the free reader.

Getting Driver Updates

You can download driver updates by visiting:

http://www.nvidia.com/content/drivers/drivers.asp

General Questions

1. I only have a single TV cable or antenna feed. How can I record two channels at the same time or watch one channel while recording another?

Answer

The NVIDIA DualTV card only needs a single connection to a TV cable or antenna input. It has an *internal* amplifier-splitter that routes the broadcast signal to two different tuners. Please note that the other RF connector on the bracket is for the FM radio antenna.

2. Can I connect two set-top boxes to the NVIDIA DualTV card?

Answer

Yes. The NVIDIA DualTV card supports up to two (2) set-top boxes using the dual A/V connectors (**SVID1/AUD1** and **SVID2/AUD2**) on the bracket. MCE requires an MCE-compatible remote control/receiver with IR blaster(s) to control the set-top boxes. Channel tuning is done with the set-top box, under the control of the

MCE remote receiver with IR blaster. The IR blaster is in turn commanded by the MCE application itself (for scheduled recording) or the remote control (for live TV).

3. How can I take advantage of both tuners on NVIDIA DualTV when I have a single set-top box?

Answer

When using a single set-top box you can only use the NVIDIA DualTV in single-tuner mode, unless an antenna or cable TV (RF) connection is also used. Note that when using a set-top box with MCE, channel tuning is done with the set-top box, under the control of the MCE remote receiver with IR blaster. The IR blaster is in turn commanded by the MCE application itself (for scheduled recording) or the remote control (for live TV).

You may receive premium channels only with a set-top box but not the cable TV (RF) feed.

4. I previously used a different TV Tuner card in this system. Should I uninstall the drivers for that card?

Answer

Analog tuner cards often come with WDM capture drivers, while DTV tuner cards (for reception of digital broadcast) often come with BDA drivers. NVIDIA recommends that you uninstall all existing WDM capture drivers to ensure that there is no compatibility issue. The uninstall procedure should be done before you physically remove the existing analog tuner card.

5. Are there known compatibility issues with the NVIDIA DualTV card and any systems or motherboards?

Answer

NVIDIA DualTV has been verified to comply with relevant PC specifications. However, at the time of printing this document, NVIDIA has found a case where systems with ASUS K8S-GX/MX motherboards cannot boot up when the NVIDIA DualTV card is plugged into a particular PCI slot. The workaround is simply to reinstall the NVIDIA DualTV card in the next available PCI slot.

In another case involving some versions of the ASUS P4SD-LA motherboard, the system may not perform a POST (Power-on Self Test) which is part of the hardware test and initialization sequence on boot up. This error may indicate motherboard or power supply issues supporting this card. Please consult your PC dealer.

You can get the latest information on NVIDIA's Web site at the link below (hold **Ctrl** and click the link):

http://nvidia.custhelp.com/cgi-bin/nvidia.cfg/php/enduser/std_alp.php

6. Are there any known compatibility issues with the NVIDIA DualTV and any graphics boards or DVD decoders?

Answer

For the latest information, visit the NVIDIA Customer Care knowledge base. It is available at (hold **Ctrl** and click the link):

http://nvidia.custhelp.com/cgi-bin/nvidia.cfg/php/enduser/std_alp.php

7. What are the basic trouble-shooting steps if I cannot get the tuner to receive TV pictures?

Answer

Please check that the following tasks have been completed:

- Ensure that the NVIDIA DualTV card is securely installed in your computer and that a television cable, antenna, or set-top box is properly connected.
- Ensure you have uninstalled any old drivers(WDM) from previous analog tuner card(s) (see other FAQ entries).
- Load the software CD and follow the installation prompts to completion (including restarting the system).
- Verify that the NVIDIA DualTV WDM driver is installed properly and enabled (see other FAQ entries).
- Ensure that you complete the first-time TV set-up procedures in Microsoft Windows Media Center Edition. See *Setting Up a TV Tuner in MCE* on page 27.
- Verify that the NVIDIA PureVideo decoder has the highest priority (if there are other installed decoders on your system) using the following utility:

  http://www.microsoft.com/downloads/details.aspx?FamilyID=de1491ac-0ab6-4990-943d-627e6ade9fcb&displaylang=en

  If the utility does not work or address the problem, you may need to uninstall any 3rd party decoders using **Add/Remove Programs** in the Windows control panel.

8. If my system already has another DVD decoder/player (known as MPEG decoder/player) installed, which decoder/player will Windows (MCE or XP) use?

Answer

When a decoder is installed on your system, it creates a priority for Windows to use it when an application needs it. NVIDIA DualTV MCE installs the NVIDIA PureVideo decoder and attempt to configure it as the default decoder for all applications.

If you are unsure that the NVIDIA decoder is being used, you can check to see if the NVIDIA PureVideo decoder taskbar icon displays when an MPEG-2 file or DVD is playing. You can uninstall all other decoders to ensure that the NVIDIA PureVideo decoder is used for all MPEG-2 and DVD playback (this step is also useful for troubleshooting purposes).

In addition, the Microsoft Windows XP Video Decoder Checkup Utility can determine if a DVD decoder is installed on your computer and whether or not the decoder is compatible. You can also set the priorities among the decoders if multiple versions are installed. To download this utility please visit:

http://www.microsoft.com/downloads/details.aspx?FamilyID=de1491ac-0ab6-4990-943d-627e6ade9fcb&displaylang=en

9. How can I identify the version of NVIDIA DualTV driver installed and whether it is enabled and otherwise functioning?

Answer

Please follow these steps:

- Go to Start➢Control Panel➢System.
- Select the **Hardware** tab.
- Select Device Manager.
- Expand the **Sound, video and game controllers** branch in the device tree by clicking the **+** sign next to it.
- Right-click on the **NVIDIA DualTV Tuner** device and select **Properties**.
- Select the **Driver** tab. The driver version and status are listed.

http://www.microsoft.com/downloads/details.aspx?FamilyID=de1491ac-0ab6-4990-943d-627e6ade9fcb&displaylang=en

10. How can I install a driver update if it does not come with an installer (setup file)?

Answer

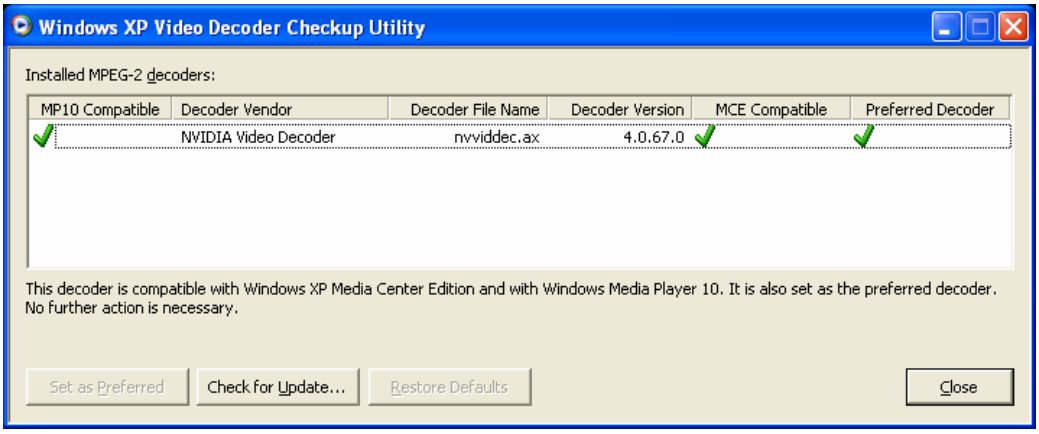
You can install the driver using the "INF install" approach:

- Download the driver to a folder on your system.
- Go to Start➢Control Panel➢System.
- Select the **Hardware** tab.
- Select Device Manager.
- Expand the **Sound, video and game controllers** branch in the device tree by clicking the **+** sign next to it.
- Right-click on the **NVIDIA DualTV Tuner** device and select **Update Driver**.
- Select **No, not this time** on the first page of the **Hardware Update Wizard** and click **Next** to continue.
- Select **Install from a specific location** on the next page and click **Next**.
- Check **Include this location** in the search and click the **Browse** button.
- Select the folder on your system that contains the updated driver and press the **OK** button.
- Click Continue Anyway on the Hardware Installation dialog.
- Click **Finish**.
- Restart your system.

11. How can I tell the version number of the NVIDIA PureVideo DVD Decoder (other than from version text on the CD)?

Answer

The Microsoft Windows XP Video Decoder Checkup Utility (see FAQ #8) will tell you the version of the NVIDIA PureVideo decoder installed on your computer. Currently, the utility replaces the first number with a **4** instead of a **1.** See the following screenshot:



12. What should I try if the Windows Plug-and-Play function does not seem to detect the NVIDIA DualTV card?

Answer

Please try the following procedure:

- Shut down the PC.
- Remove the power cord from the system and all cables from the NVIDIA DualTV card.
- Reseat the card properly in the PCI slot or insert the card into a different PCI slot on your PC motherboard.
- Reconnect the cables and power up your computer.

13. What should I do if I see stuttering video when I watch live TV or record video to my PC?

Answer

Frame dropping is typically a result of a hardware component running slowly, possibly due to improper configuration. Please try the following:

- Check that Direct Memory Access mode is enabled for your IDE hard drive to improve transfer speeds and lower CPU utilization.
- Close any running (background) programs that are not being used.
- De-fragment your hard drive (it is recommended that you do this at least once a month).
- If you are using an antenna to receive an over-the-air TV signal, please make sure the signal is strong and the antenna is capable of delivering a good signal.
- Update your video card drivers to the latest version available from your video card manufacturer's website.

14. There is no picture when playing a DVD in Windows Media Player. I already have the NVIDIA PureVideo decoder installed.

Answer

Please perform the following steps to troubleshoot this issue (hold **Ctrl** and click the link to go to the Web page).

- Ensure your system meets the NVIDIA PureVideo decoder System requirements.
  http://www.nvidia.com/object/dvd_decoder_sysreqs.html
- Ensure you have the latest drivers for your graphics card.
  - **NVIDIA**
    http://www.nvidia.com/content/drivers/drivers.asp
  - **ATI**
    http://www.ati.com/support/driver.html
  - **Intel**
    http://downloadfinder.intel.com/scripts-df/support_intel.asp?iid=HPAGE+header_support_download
- While the minimum version required is Windows Media Player 9; NVIDIA highly recommends Windows Media Player 10.
  http://www.microsoft.com/windows/windowsmedia/download/default.asp
- Please update to Windows XP service pack 2 and Direct X 9.0c for the latest Microsoft Operating System and Direct X runtime fixes.
  http://windowsupdate.microsoft.com
- Use the decoder checkup utility to ensure the Decoder is installed and has priority if other 3rd party decoders are installed.
  http://www.microsoft.com/downloads/details.aspx?familyid=de1491ac-0ab6-4990-943d-627e6ade9fcb&displaylang=en

When you have gone through these steps, try to playback DVD video within Media Player 10 or Windows Media Center Edition.

15. What can I try if I get poor TV reception from my NVIDIA DualTV when using an antenna to receive over-the-air TV broadcasts?

Answer

If you experience choppy playback because of weak signal reception, please make sure the antenna is placed far away from the PC to avoid signal interference. An amplified antenna may also provide better results. If you live in an area surrounded by tall buildings or hills, an outdoor antenna may be required.

16. I would like to download my home movies from my camcorder or VCR and make a DVD to share with my family. How can I do that?

Answer

You can use Microsoft MovieMaker in an MCE system. Connect your camcorder or VCR to the NVIDIA DualTV tuner card using the **SVID1/AUD1** connections on the bracket of the card if you do not also have a set-top box connected, or **SVID2/AUD2** connections if you do have a set-top box connected. You may then use MovieMaker to capture, edit, and archive your video.

Technically you can connect a VCR to view live or recorded programs or make instant/timer-based recording on MCE. In this case you need to have an MCE-compatible remote/receiver connected and the respective driver loaded in order to complete MCE set-up as if the VCR you are connecting is a set-top box. In this case, however, MCE does not actually control the VCR via the IR blaster. You have to manually set the channel on the VCR.

17. What is MediaSqueeze and what are its benefits? How does it work in my NVIDIA DualTV MCE?

Answer

NVIDIA MediaSqueeze™ compression technology allows you to store more of your TV program recordings on your storage media. There are two aspects of MediaSqueeze:

- NVIDIA DualTV can record your programs at a lower bit rate than competing solutions while still providing good image quality. With a lower bit rate, the resulting file size is smaller, so you can store more TV programs on your hard disk (or a DVD when you archive your recordings). To use this aspect of MediaSqueeze change the recording quality settings in MCE or the video capture application you are using. Those applications translate the quality setting into a bit rate setting.
- NVIDIA DualTV's MediaSqueeze technology can also be used to convert your TV program recording files from a high bit-rate to a lower bit-rate. This is useful if you are archiving a large number of TV program recordings to a DVD and they will not all fit. To use this feature, you need a software application that takes advantage of the NVIDIA DualTV's MediaSqueeze technology.

The following table summarizes how a NVIDIA DualTV MCE user can take advantage of NVIDIA's MediaSqueeze technology.

Aspects of MediaSqueeze	NVIDIA DualTV MCE			
	MCE MyTV	**Microsoft MovieMaker***	**Sonic MyDVD LE * v6.11 or Later**	**Sonic MyDVD Studio * v6.11 or Later**
Quality recording at lower bit rate	TV Recording	TV/Video Capture	TV/Video Capture	TV/Video Capture
Bit rate conversion			Archive to DVD	Archive to DVD

* Microsoft MovieMaker comes with Microsoft Windows XP and Media Center Edition 2005. Sonic MyDVD must be v6.11 or later to support NVIDIA DualTV

FAQs Specific to Microsoft Windows XP MCE

1. When I install a new TV Tuner such as the NVIDIA DualTV, change the TV signal type, or update the tuner driver, should I always launch the Media Center TV setup wizard?

Answer

Yes. You should run the MCE TV setup wizard every time you install a new TV tuner or change the signal type (e.g. switching from a direct cable TV feed to set-top box). NVIDIA recommends that you run the MCE TV setup wizard after updating the tuner driver as well.

2. I already have another TV Tuner card in my MCE system. Should I remove the tuner card first?

Answer

At the time of print, MCE supports concurrent use of up to two digital TV tuners and either two separate analog single-tuner cards or one analog dual-tuner card. If you already have an analog single-tuner card installed, you need to remove it first. Please uninstall the related driver before physically removing the card.

3. What remote control should I use with Microsoft Windows Media Center Edition?

Answer

You need to use an MCE-compatible remote control/receiver which may come with your MCE system; you may also purchase one from NVIDIA's online store or a third-party vendor.

If you intend to use one or two set-top boxes with your MCE PC, an MCE-compatible remote control/receiver with IR blaster(s) is necessary. The remote control unit does not control the set-top boxes directly; they are controlled by the IR codes transmitted from the IR blaster(s) connected to the USB remote receiver.

If you do not connect a set-top box to the MCE PC, the MCE remote control is optional but will enhance your user experience.

4. The NVIDIA Audio Decoder is not working under Media Center Edition while watching live TV. What should I do?

Answer

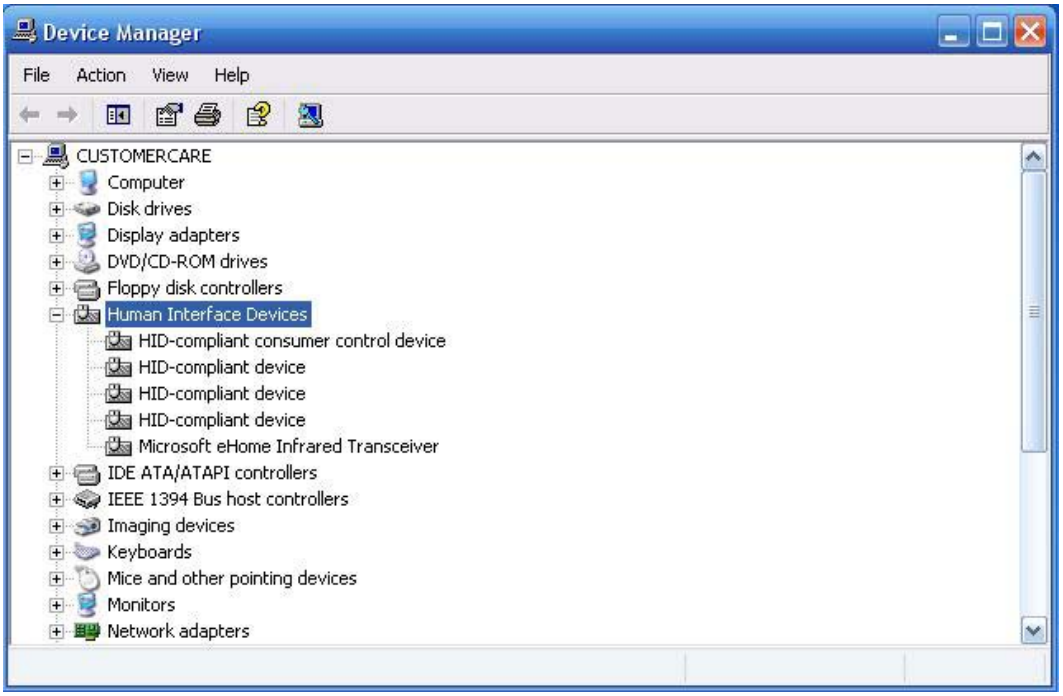
This is expected behavior. MCE uses Microsoft's own MPEG-1 audio decoder instead of the NVIDIA audio decoder.

5. I have configured MCE to support a set-top box, but the MCE IR (infrared) blaster does not seem to control the set-top box. Is there anything I should try?

Answer

Remove or reinstall the Microsoft **eHome Infrared Transceiver** driver under the **Device Manager** in the Control Panel. Alternatively, you can update the eHome remote driver from the link below. Also, make sure the LED controller cable (IR blaster) is plugged into your remote receiver and positioned properly over the remote sensor on your set-top box.

http://www.microsoft.com/downloads/details.aspx?familyid=bb89a23d-b487-42b9-85e1-c0f5eb690e49&displaylang=en



6. How can I enable or verify closed captioning is working in MCE?

Answer

MCE 2005 supports closed captioning by default when you press the mute button on the Microsoft eHome remote control or can be set within the on-screen user interface. Obviously the broadcast program needs to carry closed captioning for you to see the text.

To change this setting, go to **Settings➢TV➢Audio**.

7. My system runs MCE 2005 previously upgraded from MCE 2004. Although the NVIDIA DualTV card appears to install correctly, MCE cannot detect the tuner.

Answer

Please perform the following steps.

1. Install the latest NVIDIA DualTV drivers from our Software Downloads page at:
   http://www.nvidia.com/content/drivers/drivers.asp
2. Verify that the system sees an installed Microsoft certified DVD Decoder (the NVIDIA PureVideo decoder if you ran the NVIDIA DualTV install CD) with the Microsoft Decoder Checkup Utility:
   http://www.microsoft.com/downloads/details.aspx?FamilyID=DE1491AC-0AB6-4990-943D-627E6ADE9FCB&displaylang=en
3. The motherboard chipset drivers may need to be updated. Here is a list of the most common motherboard chipset manufacturers:

ALi	http://www.ali.com.tw
AMD	http://www.amd.com
Intel	http://www.intel.com
NVIDIA	http://www.nvidia.com
SiS	http://www.sis.com
ULi	http://www.uli.com.tw
VIA	http://www.viaarena.com

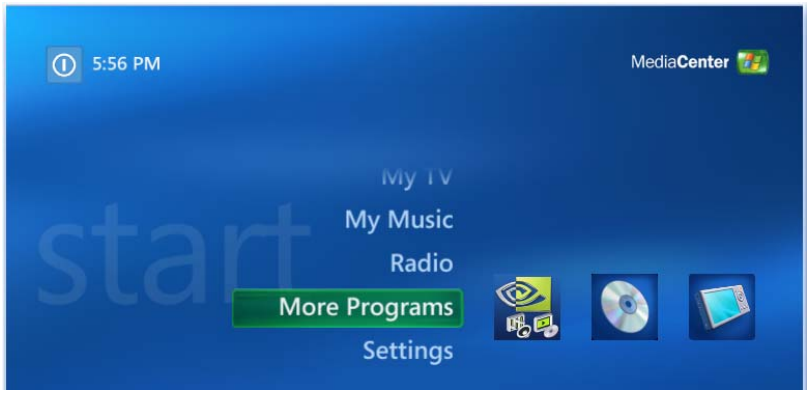
If the issue is still not resolved, you may need to perform a fresh installation of MCE 2005. You should back up all of your important files before formatting your hard drive. A clean install of Windows is always preferred over upgrading from a previous Windows version (old files, registry entries and settings from your previous Windows version can cause instability on your PC).

8. What is "NVIDIA MCE Extension" and how can I access it?

Answer

One of the modules installed during NVIDIA DualTV's software installation was the NVIDIA MCE Extension.

This module provides additional tools to enhance your audio and video experience. To access these tools, go to **More Programs**.



Select **NVIDIA Settings**

Additional tools are available to you if you have an NVIDIA graphics card installed along with the latest NVIDIA MCE graphics driver. You can download the driver from the NVIDIA Web site (http://www.nvidia.com). Consult the NVIDIA Customer Care Knowledge Base for more information about the NVIDIA MCE Extensions.

Registration, Support and Warranty

Registering Your NVIDIA DualTV

At the end of the NVIDIA DualTV software installation, the installation wizard prompts you to register your NVIDIA DualTV. You can register immediately, or choose the option to remind you in 14 days. An Internet connection (for direct NVIDIA registration server access or for e-mail) or a phone line (for direct toll-free call to the registration server) is needed. The NVIDIA DualTV software installation program also installs a registration short-cut in a programs group accessible from the Windows **START** menu.

After you register your NVIDIA product, you have priority access to NVIDIA Customer Care by using your assigned user-ID and password to log on. You can also elect to receive automatic notification of special promotions and software updates through e-mail to ensure that your NVIDIA product continues to operate optimally.

Warranty and Support

NVIDIA warranty and support (Customer Care) information is available at:

www.nvidia.com/support

www.nvidia.com/warranty

You may also access these sites from the NVIDIA's main Web site at:

www.nvidia.com

Upon registration, you will receive an acknowledgement e-mail which includes a toll-free phone number, sign-on information for NVIDIA Customer Care, and other information.

The NVIDIA support site allows you to search our extensive knowledge base and communicate with our Customer Care staff.

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Compliance

Applicable to EC Directives: 89/336/EEC & Amending Directives: 92/31/EEC for ITE Class B Digital Devices, EN60950:2002, EN55022:2003, EN61000-3-2:2000, EN61000-3-3:2001, EN55024:2003, EN55020:2002 & EN55013:2001, FCC Part 15 Class B ITE, UL 60950 3rd Edition (2000) (File Number E204896), CUL CAN/CSA 22.2 NO.60950-00, CTICK AS/NZS Cispr22:2002, MIC Korea Class B, VCCI Class B, BSMI/CNS13438:May1997 Class B ITE.

FCC

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

— Reorient or relocate the receiving antenna.

— Increase the separation between the equipment and receiver.

— Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

— Consult the dealer or an experienced radio/TV technician for help.

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